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CLOSED ETHER AND A COLOR SIGN

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This paper is the result of personal experience as an anesthetist and of rather extensive observations of anesthetic routine in the hospitals of this country and of Europe on the part of one of us (J. B.), and of experimental and theoretical studies on the circulation and respiration under anesthesia by the other. Although we shall have occasion to discuss here the topic of "open" versus "closed" methods of etherization, and in particular to report observations with a simple bag method of administration, the primary purpose of this paper is a more general one, namely, to emphasize the hitherto unappreciated, or at least undefined, importance and significance of a color sign.

We shall show that the distinction between pinkness and pallor in a patient under ether is the distinction between a well-sustained circulation and a syncopeal condition — a condition resembling if not identical with shock. We shall show that the pallor and syncope are the results of acapnia induced by a too "open" method, and that with a "closed" method by which a fair amount of rebreathing can be maintained an excessive loss of carbon dioxid is prevented. Visceral tonus is thus maintained and the circulation supported, as evidenced by the pink color of the skin. The results of recognizing this sign, which depends on the presence of a normal volume of blood in cutaneous vessels, and regulating the rebreathing by it, are (1) a smooth and uneventful anesthesia, and (2) an almost-complete avoidance of a prolonged period of emergence, nausea, and gas pains.

We have first to consider the much debated question of "open" versus "closed" ether. From the time of the discovery of its anesthetic action down to only a few years ago, ether was almost universally given by a "closed" or semiclosed method. Doubtless it frequently happened that fresh air was shut off almost to the point of suffocation. To avoid this, the Germans in particular have in general gone to the other extreme with the "open" or "drop" method. Properly speaking, however, the term "open" can scarcely be applied to most of the so-called "open" methods used in this country, or even to some of those seen in Germany. The many layers of gauze with which the mask is usually covered offer a considerable resistance to a free exchange of air, while the dead space within the mask into and from which the patient rebreathes often amounts to several hundred cubic centimeters.

We believe that no one who has had any considerable experience with a really open method of etherization (without preliminary medication) will deny that among its common characteristics are a dripping frosted mask, affording a very poor surface for volatilization, and a prolonged first stage, often followed by rigidity, pallor and labored breathing on the part of the patient. During many of the open ethers seen by one of us in Germany it was necessary to invoke the closed "ether-rausch" mask to get the patient under sufficiently to allow the further progress of the operation. The patient who, throughout a prolonged operation, has had a really open ether anesthesia, is likely to leave the table with skin pallid, with coverings drenched in perspiration grown cold from evaporation, and vitality depressed almost to the point of shock. He then becomes a subject for much anxiety on the part of the staff on account of his general condition and his intense nausea and prolonged vomiting. Even more important is the fact that an intestinal paresis often develops accompanied by distention with gas. This may last two or three days or more, and may even result fatally. If once the attention is fixed on the point, the observer soon begins to appreciate that in the great majority of cases the intensity of this distressing clinical picture varies in direct proportion to the degree to which the etherization was really open, and inversely with the extent to which the anesthesia was, properly speaking, closed.

Very different are the results when ether is administered, as is often still to be seen in country practice here, by means of a cone made of a towel. This simple but effective method insures a considerable degree of rebreathing. The patient in many cases receives what really amounts to a good closed ether, and comes through the operation with color excellent, skin warm and dry, breathing quiet, regular and uninterrupted, and pulse strong and not greatly accelerated. A patient so treated does not usually have any considerable amount of nausea or vomiting, and his convalescence is not made a torment by gas pains. Why?

Today the answer is clear beyond a reasonable doubt. It is: Because the extent of the rebreathing was such as to counteract to a great extent the hyperpnea induced by the ether. The patient was thus protected from the loss of an excessive amount of carbon dioxid at a time when, as under all anesthetics, its rate of production in the tissues was subnormal. The circulation and respiration, the intestinal tonus and peristalsis were thus supported by one of the normal and necessary physiologic stimulants. In spite of the rebreath-

ing and conservation of carbon dioxid, if a sufficient supply of fresh air was admitted to the mask to prevent cyanosis or even any degree of purple color in the skin, there was at all times an ample oxygen supply. This condition is equally necessary to the maintenance of vitality, since anoxemia induces acidosis and a general intoxication. Under ether, pallor is a sign of a weakened circulation, due in most cases to acapnia, which must be counteracted by increased rebreathing and conservation of carbon dioxid. A purple tint in the skin is a sign of insufficient oxygen and an indication for less rebreathing and more fresh air. Thus acapnia and anoxemia are the Scylla and Charybdis between which the anesthetist must steer a middle course. His sailing orders should be: Keep the patient pink.

For the sake of comparison it may be pointed out that under nitrous oxid-oxygen anesthesia given by a rebreathing method — the accepted and proper procedure since Gatch[1] demonstrated its value — the body's store of carbon dioxid is conserved. The circulation is thus supported, and pallor is extremely rare. Insufficient oxygen is almost the sole danger to be guarded against. The patient's color varies between pinkness, and a purple or even cyanotic tint; the former indicates an adequate oxygen supply, and the latter a deficiency. Both of these colors have, however, one condition in common: a considerable volume of blood in the cutaneous vessels on account of a normal degree of tonus in the visceral blood vessels. These conditions contrast strongly with those often seen under open ether. Here cyanosis is rare, while pallor is common, and is the sign, exactly as in ordinary life, of an abolition of visceral tonus, with its consequent great reduction in the volume of the circulating blood. It is the special function of the rebreathing in closed methods of etherization no less than with nitrous oxid to prevent such a circulatory depression. We are inclined to believe that to a great extent the special virtues claimed for nitrous oxid in contrast with ether are not inherent, but due to the fact that the former is administered by rebreathing and the latter by more or less open methods.

The conclusion that closed is absolutely to be preferred to open ether had been reached by one of us (J. B.) by observation in many clinics and by trial and comparison of the two methods, before the reason was made obvious by the recent advances in our knowledge of the part which carbon dioxid normally plays in the maintenance of respiration, circulation, and intestinal tonus and motility. Later, with this idea in mind, many of the larger European clinics were visited and their various methods observed. In Germany one sees for the most part open methods. To see closed ether given as a routine one must go to France or Denmark, the two countries most resistant to German influence. It is especially in Copenhagen at the clinic of Professor Rovsing that one may see what can be done with a rebreathing method of etherization. No one who has once seen a series of anesthesias in his clinic at the beautifully appointed Rykshospital can thereafter forget or doubt the advantages obtained by Rovsing's simple closed ether method.

Rovsing's mask,[2] modified from that of Wancher, consists merely of a thick pliable rubber face piece with a hard rubber sleeve and a sheet of "gaudafil"[3] tissue (about 75 centimeters square) gathered roughly into the form of a bag (with an air capacity of 3 or 4 liters) and tied over the hard rubber sleeve with tape. The entire contents (50 c.c.) of a freshly opened small bottle of ether is poured through the sleeve into the bottom of the tissue bag, and all is ready.

In one form or another the essential features of this device have been in use at the Rykshospital for ten years, and it is now used exclusively in Rovsing's clinic even for lung cases. There is no chilling of the respiratory tract, for the patient's own breath warms the ether vapor before it is inhaled. The rate of vaporization is easily augmented, when necessary: the anesthetist merely places his hand under the bottom of the bag, which hangs down 20 centimeters or more below and beside the patient's face, and thus warms and agitates the liquid ether which it contains. There is no waste evaporation of unused ether, nor do the patient's expirations blow it off and out of the mask. The expenditure of only 60 to 75 c.c. of ether is usually sufficient to maintain surgical anesthesia in an adult for an hour and a half or two hours. When the operation is ended, the sheet of gaudafil is untied from the face piece, and washed. The entire device is readily and without injury carried in one's coat pocket.

It is noteworthy that although the device constitutes absolutely the irreducible minimum of apparatus (since it eliminates even the dripping can or bottle), it affords nevertheless uncomplicated, instantaneous, and to a considerable extent independent control over two conditions, namely, on the one hand the amount of ether vaporized and inhaled, and on the other the degree of rebreathing and the supply of fresh air. The separate control of these processes is especially to be emphasized in any properly devised modern method of administering a gaseous or vaporized anesthetic. In this particular apparatus the two processes seem to work out quite naturally and, indeed, more or less unintentionally, since the use of this mask and bag at the Rykshospital is based wholly on experience and not at all, so far as we are aware, on the theory of rebreathing as a preventive of acapnia. Whatever the basis, however, it is certainly true that the condition of the patient both during and after anesthesia is, so far as the effects of the anesthesia itself are concerned, extraordinarily good as to color, pulse, respiration, general reaction and freedom from nausea and vomiting.

We wish to dwell particularly on one fact which appears to us to be especially significant. It is that at the end of a laparotomy under this method of anesthesia, it is a not uncommon sight to see the intestines active in peristalsis. Under open methods of anesthesia this condition is so rare as to be almost unheard of, while the occurrence of gas pains is as common a sequel of open methods as it is rare in Professor Rovsing's clinic. What is the meaning of this? Animal experimentation affords, we believe, a certain explanation. Thus, it is a well-recognized fact that when animals are etherized by ordinary methods, and the abdomen is opened without special precautions, peri-

1. Gatch, Willis D.: Nitrous Oxid-Oxygen Anesthesia by the Method of Rebreathing, The Journal A. M. A., March 5, 1910, p. 775; The Use of Rebreathing in the Administration of Anesthetics, Nov. 11, 1911, p. 1593.

2. Rovsing: Abdominal Surgery, Clinical Lectures for Students and Physicians, Translation by Pilcher, Philadelphia, 1914.

3. Gaudafil is an artificial membrane, apparently of some substance related to celluloid, strong, durable, flexible, transparent, and entirely unaffected by ether or by boiling. One piece of the tissue is good for twelve to sixteen anesthesias when properly cared for. Under various names it is obtainable from nearly any European firm carrying medical supplies. The same material, or something closely similar, is now coming into common use in this country to cover candies and other foods in shop windows.

stalsis is practically never seen. Even expert investigators[4] succeeded only in exciting a form of movement which the later observations of Cannon,[5] by means of the Roentgen ray and also with the saline bath, showed to be quite abnormal. Meltzer[6] even went so far as to urge that the act of opening the abdomen discharged a reflex inhibition on the intestines. It remained for one of us[7] to show that entirely normal peristalsis is readily produced and maintained with very little protection to the intestines and stomach, in the widely opened abdomen of a dog under morphin and ether, provided that a tube of a size sufficient to involve considerable rebreathing is attached to the animal's trachea or to the mask over its head.

These facts, clinical and experimental, taken together appear to us to afford a practically absolute proof of the suggestion put forward by one of us some years ago in connection with the acapnia theory, that postoperative gas pains and intestinal paresis are, usually at least, due to excessive loss of carbon dioxid through the lungs and to a less extent from the exposed viscera themselves. It is true that this claim was combated by Hooker[8] on experimental grounds, but he seems to have overlooked the fact that in the living body, carbon dioxid exists not as a gas but dissolved, largely combined with alkalies, and in part ionized. Conclusive and entirely impartial evidence on the subject is afforded by the work of Rona and Neukirch.[9] They have shown that for a nutrient fluid (Tyrode's as compared with Locke's fluid) in which a piece of excised intestine exhibits its tonus and rhythmic activity, the carbonic acid ion is a peculiarly, and in fact an almost critically, important ingredient.

Returning now to the color sign, we have first to show that excessive pulmonary ventilation is capable of inducing the depression of the circulation indicated by intense pallor, and second that the gases in the Rovsing bag during an anesthesia are in such percentages as to justify the importance which we assign to their inhalation.

On the first of these points we would refer to the series of papers in which one of us demonstrated that acapnial shock can be experimentally produced in dogs, and attempted to trace the processes involved.[10] While many of the facts there for the first time described have been confirmed by other investigators, this confirmation has not been generally extended to the application which it was attempted to make of them to the problem of shock. Thus Edsall,[11] in experiments on forced breathing in men, observed all the characteristic distressing effects of a temporary artificial acapnia. He even found it necessary to restrain the subjects "in order to avoid bad results." But he adds that "none of the men showed any signs of shock. The blood pressure remained essentially unaltered." It is probable that Edsall refers here only to the arterial pressure. He entirely overlooks the fact, repeatedly emphasized by Henderson, that in acapnia the arterial pressure is not lowered to any great extent until an extreme stage is attained — when it falls rapidly and usually fatally — but that up to this stage there is a progressive decrease in the volume of the blood stream (circulation rate) because of a greatly, and finally a fatally, lessened venous return to the right heart. In surgical shock (apart from the acapnia question) this fact of the primary importance of decreased venous return, not vasomotor failure, has recently been confirmed by Mann[12] (working with Prof. W. D. Gatch), and by Morison and Hooker.[13] It may also be mentioned here that Dr. J. S. Haldane, whose work has been the foundation for the greater part of recent progress in regard to respiration, the blood gases, acidosis, etc., writes to one of us that by a new method of determining the circulation rate in man he finds that after forced breathing the volume of blood returning to the right heart is greatly decreased.

What one has himself experienced is, however, more convincing than any citations of authorities. We would therefore urge the reader himself to perform some of the simple experiments on the subject of respiration recently published by one of us[14] for teaching purposes and already adopted in many medical schools. If this is too much trouble, let the reader the next time that he happens to give an open ether try the experiment of breathing in time with the patient and to approximately the same volume. In most cases it will not be many minutes before the anesthetist will need attention nearly as badly as the patient. Let him then try it again, but this time with a paper bag held over his nose and mouth, and no ill effects will be experienced. Or if this is still too much to ask, we would submit the following memorandum of a rather extreme but decidedly instructive case, written at our request by a student, Mr. H. W. Haggard, in the present second year class in the Yale Medical School, a day or two after the regular laboratory work in the physiology of respiration was begun:

> I did forced breathing violently for two and a half minutes. Prior to this I had felt reasonably well. During this period of breathing I became first "shaky" and somewhat dizzy. This first trembling weakness grew into a violent nausea with a horrible feeling of "goneness" in the pit of my stomach. I was forced to take hold of the table to keep from falling. My eyes, up to now closed, I opened. The room seemed to reel and then became quite dark and I would have fallen if my partner had not steadied me. My feet tingled and went to "sleep"; my hands followed.
>
> The above covered a period of two and a half minutes. I then involuntarily stopped breathing. After a short apnea I took deep sobbing involuntary breaths. I am told that I was very pale. My face felt drawn and my lips were dry. My head ached violently in the frontal fraction. After some time my hands were normal in feeling—a little later my feet.
>
> I went home feeling miserable. My supper of crackers and milk I vomited shortly after eating. My head ached persistently. I went to bed and slept fitfully and restlessly. My throat was dry and sore—my lips dry.
>
> About 3 a. m. I awoke hungry and feeling perfectly normal.

In regard to this statement of experiences, we would merely say that in his interest in the experiment, which was new to him, Mr. Haggard performed it perhaps a little more vigorously than the laboratory directions require. Although a healthy and vigorous young man, he is much more susceptible than most persons to the

4. Bayliss and Starling: Jour. Physiol., 1899, xxiv, 127.
5. Cannon: Mechanical Factors of Digestion, London and New York, 1911.
6. Meltzer, S. J.: The Nature of Shock, Arch. Int. Med., July, 1908, p. 571.
7. Henderson, Yandell: Am. Jour. Physiol., 1909, xxiv, 66.
8. Hooker: Am. Jour. Physiol., 1912, xxxi, 47.
9. Rona and Neukirch: Arch. f. d. ges. Physiol., 1912, cxlviii, 273.
10. Henderson, Yandell: Acapnia and Shock (seven papers), Am. Jour. Physiol., 1908-1913, xxi-xxxi.
11. Edsall: Medical Communications of the Massachusetts Medical Society, 1912, xxiii, Article 2.
12. Mann: Bull. Johns Hopkins Hosp., 1914, xxv, 205.
13. Morison and Hooker: Am. Jour. Physiol., 1915, xxxvii, 86. Porter and Quinby: Ibid, 1908, xx, 500. Seelig and Lyon: Ibid, 1908, lii, 45.
14. Henderson, Yandell: Respiratory Experiments on Man, THE JOURNAL A. M. A., April 11, 1914, p. 1133.

effects of acapnia. But neither the excessiveness of the pulmonary ventilation and consequent degree of acapnia, nor the acuteness of the effects exceeded what is often to be seen in the operating room as the result of the stimulating effects on respiration of ether administered by a truly open method.

On this last point we may further instance some experiments[15] performed recently by one of us on himself and others in the laboratory. In these experiments a mixture of 5 per cent. ether vapor in air was prepared in a large bag. There was first a preliminary normal period in which the rate and amplitude of breathing was recorded graphically, and the volume of air exhaled per minute was measured by means of a gasometer connected with an expiratory valve on a mouth piece. Then the bag of air and ether vapor was connected to the inspiratory valve on the mouth piece, and this inspired for several minutes or almost to the point of unconsciousness. In all cases the rate of breathing was quickened and deepened, and the volume exhaled into the spirometer greatly increased. The bag was then disconnected, so that the subject again received fresh air, and the record and measurement continued. They showed in some cases marked and prolonged apnea, interrupted with gasps, exactly as after voluntarily forced breathing, and a decrease in the volume of air breathed corresponding to the excess noted during the period of etherization.

On the second point mentioned above as requiring demonstration — that of the composition of the gases in the mask and bag of such a closed device as that of Rovsing — we can report the following observations and analyses. They were made at the New Haven Hospital on cases of Dr. J. M. Flint, to whom we are greatly indebted for the opportunity.

ANALYSES OF GAS SAMPLES FROM ROVSING'S BAG*

Samples	Ether	Carbon Dioxid	Oxygen	Remarks: Color, Etc.
1	10.15	3.18	9.03	Man; had subject, purple.
2	7.11	2.39	13.35	Boy; pale pink.
3	10.25	3.01	6.96	Boy; somewhat cyanotic.
4	9.45	2.79	15.85	Boy; pink.
6	9.92	2.67	16.78	Boy; pink, mask partly open.
8	8.90	3.27	8.35	Boy; light anesthesia and slight cyanosis.
9	10.35	2.69	10.15	Boy; good condition, respiration 32, pulse 110.
Average:	9.32	2.85	11.50	

* The figures all represent percentage by volume. The analyses were made with a Haldane apparatus, the ether being absorbed by prolonged shaking with concentrated sulphuric acid in a small glass bulb.

These observations were not intended to illustrate the benefits of the method — they are established by the general results stated above — but to show the extent to which conditions are controllable under it. In considering the data in the table it must not be forgotten that the mask is kept at nearly all times partly open. The bag is thus used to afford fractional, not total rebreathing. Thus if the gases in the bag are 10 per cent. oxygen, 3 per cent. carbon dioxid, and 10 per cent. ether, and the mask is held so that one half of each inspiration is fresh air (oxygen about 21 per cent.), the gases actually entering the lungs will be 15.5 per cent. oxygen, 1.5 per cent. carbon dioxid and 5.0 per cent. ether. If the mask is held closer so that one third of the inspiration is fresh air and two thirds drawn from the bag, the inhaled gases will be approximately oxygen 13.7, carbon dioxid 2.0, and ether 6.7 per cent.

15. Henderson, Yandell: Tr. Am. Gynec. Soc., 1914; Surg., Gynec. and Obst., 1914, p. 386.

With these points in mind it will be seen from the analyses that the tension, or partial pressure of ether vapor in the bag is such that the mask can readily be lifted sufficiently to allow the patient to draw in 30 or 40 per cent. of fresh air with 60 or 70 per cent. from the bag and thus receive the 6.7 per cent., or 51 mm., of ether vapor shown by Boothby[16] to be the optimum. At the same time the patient inspires about 2 per cent. of carbon dioxid, since the amount of this gas in the bag is fairly constant around 3 per cent., while the oxygen content of the air inhaled varies, owing to the wider variations of this gas in the bag, from about 11 to 18 or 19 per cent. We would particularly point out the close correspondence between the notes regarding pinkness and cyanosis, and the high and low oxygen percentages in the bag. In general, physiologists take 13 per cent. as about the figure down to which variations in the oxygen content of the inspired air are without immediately appreciable effect, while Teter[17] states that in a patient under nitrous oxid, cyanosis appears when the oxygen falls below 11 per cent. — a figure with which our analyses are in close agreement. Evidently pinkness certifies an adequate oxygen supply.

We would particularly emphasize the importance of all measures which tend to lessen hyperpnea and loss of carbon dioxid during the induction period of ether anesthesia. There is a widely prevalent belief that some patients require an enormously greater amount of anesthetic than do others. Boothby[16] has shown, however, that there really is little or no variation in the anesthetic tension of ether for different individuals. Doubtless a greater amount is needed to saturate the tissues of a fat person than those of a thin one. But we are convinced from an extensive experience on the part of one of us in etherizing dogs, that the huge quantities of ether required to bring some subjects into anesthesia depend, not on the amount absorbed, but almost wholly on the amount wasted by being blown off the mask during the large and rapid expirations. The respiratory center of different subjects, both dogs and men, varies greatly in the readiness with which it passes into a condition of abnormal excitement and activity. It is not very unusual to find dogs which practically cannot be brought to anesthesia with ether alone administered by an open method. They blow it away as fast as it can be poured on, and faster than it can be properly volatilized. They thus become intensely acapnic. With a closed mask, on the contrary, such subjects require no more ether than do others of a more placid temperament and less readily excitable respiratory center. Evidently in such animals, as Boothby's observation suggests to be the case with difficult subjects among men, the reason for the prolongation of the initial periods with open ether is not that they require more anesthetic, but that owing to the enormous waste, they actually absorb less than the placid subjects which quietly inhale practically all of the ether administered. It is especially the patients of this character who, when etherized by an open method, develop pallor, depression of the circulation and respiration, and subsequently nausea, vomiting and gas pains.

For the prevention of these conditions there are two auxiliary procedures which are of an importance second only to the use of a closed method. They are

16. Boothby: Jour. Pharmacol. and Exper. Therap., 1914, v, 379.
17. Teter, Charles K.: The Limitations of Nitrous Oxid with Oxygen as a General Anesthetic, The Journal A. M. A., Nov. 23, 1912, p. 1849.

proper preliminary medication, and so far as possible the absence of anxiety and fear in the mind of the patient. Theoretical, clinical and experimental grounds alike support the advantage of administering a half hour or more before every ether anesthesia, in which it is not specially contraindicated, a hypodermic of morphin and atropin in the dosage of one-fourth grain of morphin, and 1/100 grain of atropin for a healthy adult. The advantages of this prophylaxis against hyperpnea, and excitement of other functions with their subsequent depression, far outweigh in importance all of the alleged disadvantages of such preliminary medication. These statements do not apply equally to chloroform. It may also be pointed out that the amount of ether administered to a morphinized patient may be and should be considerably less than in the case of one without preliminary medication. Morphin and atropin should also be administered much more freely during the twenty-four hours following operation than is now usually done. Even from the wholly objective standpoint of conserving vitality and accelerating recovery, the advocates of nonmedication have in our opinion entirely failed to present reasons sufficiently clear and forcible to weigh against the disadvantageous results of suffering and its subconscious processes.

Essentially the same reasoning[18] applies to the prevention of fear and anxiety and to the development of the confidence of the patient in the anesthetist. We see a child or animal develop respiratory excitement (crying) from anticipation of suffering almost as easily as from actual pain. A dog or cat which is scared and distrustful is an extraordinarily difficult subject for anesthesia compared to the same animal when handled gently by one whom it trusts. Among men, the will often exerts an inhibition which produces a misleading impression of placidity. With the first few breaths of ether vapor, this inhibition is lost, and the underlying excitement manifests itself in hyperpnea and struggling — prolonged, difficult to overcome, and extremely deleterious in their subsequent effects.

The measures of psychic prophylaxis are especially important with nervous cases in which the respiration and other functions are disturbed to an unusual degree during the first half hour or more of anesthesia. In such cases, postoperative shock is more often the fault of the anesthetist than of the surgeon. Provided that there is no considerable loss of blood, and with continual swabbing, there is often more than the surgeon himself realizes — good general anesthesia will shield a patient, or an animal under experiment, almost completely from a surprisingly great amount of rough operation and insult. But no degree of surgical finesse or care mitigates the drain of vitality induced by badly managed general anesthesia.

During anesthesia it is important that respiration should so far as possible be unobstructed. To this end a small pillow should be placed under the nape of the neck — not a large one under the occiput, as is often done. The patient should be kept warm and dry by means of woolen coverings. It would be well if the body temperature were taken every fifteen minutes, since cooling is common and greatly depresses vitality. The optimum rate of respiration under ether for an adult seems to be between 30 and 35 per minute, as Teter states to be the case also with nitrous oxid. The optimum level of anesthesia is one at which muscle tone is not yet entirely abolished, as evidenced by the ability of the patient to support his own chin with little assistance from the anesthetist. Patients who snore in normal sleep should be allowed to snore peacefully under anesthesia. In the fat type of person specially addicted to it, it affords audible evidence of the optimum depth of anesthesia. However annoying to the hearer, snoring is a process which normally marks some of the happiest moments in the lives of most of us.

As regards the determination of just what constitutes "pinkness" as a skin color, it is of course to be recognized that, owing to the wide variations in pigmentation, it is not at all the same tint in one patient as in another. Anesthetists accustomed to nitrous oxid know at a glance in even the yellowest skin whether the blood is well oxygenated or not, and it is equally easy after a little attention to tell whether the cutaneous capillaries are well filled with blood or are anemic. In case there should be any doubt on this point, it is easily dispelled by the following test: One end of a glass slide (such as is used for mounting microscopic preparations) is pressed firmly on the skin of the forehead or the back of the hand over bone. A normal cutaneous circulation is evidenced when the area from which the blood is thus expelled shows white against a reddish border.

Finally, we wish frankly to admit that much remains to be done to unravel the reasons for the ill effects of acapnia. As regards the depression of the circulation, the accumulating evidence offered by many competent investigators tends, as we have shown, to substantiate the view that the failure is not primarily on the arterial side (arterial pressure), but that it is due to a stagnation of the blood in the visceral capillaries and veins, and a decrease in the stream to the right heart analogous to that induced by hemorrhage. It is not primarily the heart or the vasomotor nervous system that fails. The initial failure appears to be in some as yet ill-defined peripheral mechanism. The difficulty in explaining this consists in determining the relative importance of several possible processes which physiologic knowledge already suggests. For example, the investigations of Bohr, Haldane and Douglas, Barcroft[19] and others have demonstrated that the amount of carbon dioxid in blood exerts a powerful influence in reducing the avidity of hemoglobin for oxygen. Conversely, acapnia increases greatly the tenacity (pleionexy) with which the blood passing through the peripheral vessels holds on to its oxygen. It is therefore possible, as Haldane has suggested to one of us, that overventilated blood, that is, blood rich in oxygen and poor in carbon dioxid, may be so lacking in capacity to give off oxygen to the tissues in amounts and at pressures adequate to their needs, that the tissue cells undergo an oxygen starvation.

CONCLUSIONS

1. The same general facts and the same character of direct evidence which have established rebreathing as a proper and beneficial adjunct of nitrous oxid in general anesthesia demonstrate the advantages of rebreathing and the use of closed methods also in the administration of ether.

2. Many of the special advantages claimed for nitrous oxid as compared with ether are probably due to the fact that the former is now generally adminis-

18. Schola: Beitr. z. klin. Chir., June, 1914.

19. Barcroft: Respiratory Function of the Blood, Cambridge, 1914.

tered by rebreathing methods, and the latter by open methods, rather than to the particular qualities of the two anesthetics themselves.

3. Evidence is here adduced to show that to a very large extent the depression of the circulation and respiration, and the postoperative nausea, vomiting, intestinal paresis and gas pains incidental to etherization by open methods are the results of acapnia.

4. On this account we urge the adoption of closed and rebreathing methods, preliminary administration of morphin and atropin, and avoidance of fear and excitement.

5. The Rovsing mask and bag afford a satisfactory and efficient method of controlling the rebreathing and rate of ether administration, combined with the utmost simplicity.

6. The principal point of this paper is that by observing the color of the skin it is possible to estimate the condition of the circulation. Pallor under ether usually indicates a circulation depressed because of acapnia and needing to be restored and maintained by more rebreathing and conservation of the body's store of carbon dioxid. Excess of rebreathing and deficiency of oxygen are indicated by a cyanotic tint. The rule for the anesthetist is: Keep the patient pink.

THE BACTERIOLOGY OF THE URINE IN NONSUPPURATIVE NEPHRITIS

ITS ETIOLOGIC AND THERAPEUTIC SIGNIFICANCE *

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A causal relation of the infectious diseases to nonsuppurative nephritis, especially the acute form, is accepted, but our knowledge of the exact mechanism by which nephritis is produced is not satisfactory. In acute nephritis, where the closest connection between the specific infections and nephritis exists, there is a strong tendency to consider bacterial action as the cause of the nephritis. In an excellent review of the literature, Herrick[1] states that it is the common belief that nephritis in acute infections is due to toxins caused by the bacterial invasion of the body.

Of chronic nephritis, some cases are attributed to nonrecovery of the acute forms, while others are connected with chronic infections, such as tuberculosis and syphilis. After disposing of these cases and those due to known poisons, as lead, there remain others so obscure in their etiology as to be attributed to metabolic products, or antinephritic toxins generated by the body.

While studying the bacteriology of scarlet fever,[2] we were surprised at the frequency with which bacteria were found in the urine during the acute stage of the disease. It occurred to us that the frequency of nephritis as a complication of scarlet fever might be due to excretion of bacteria through the kidney. Later[3] we had occasion to report the demonstration of large numbers of bacteria in the urine of two typical cases of parenchymatous nephritis. The work with which the present report is concerned can best be presented by discussing: (1) the bacteriology of the urine in health; (2) the bacteriology of the urine in diseases other than nephritis; (3) the bacteriology of the urine in nephritis; (4) the etiologic significance of the bacteria found in the urine of nephritis, and (5) their importance in therapy.

I. THE BACTERIOLOGY OF THE URINE IN HEALTH

Hort[4] found great difficulty in obtaining sterile urine from healthy individuals either by catheterization, or by collecting in serial glasses. He obtained positive cultures in all of ten cases in which catheterized specimens were examined. Hort states, however, that in these cases the technic admitted of air contamination, and that in one case, in which the outlet of the catheter was protected from the air, no growth was obtained. In a series of cultures of the urine in the bladder, obtained from animals by suprapubic puncture, the urine was sterile. Hort used the urine itself as a culture medium, and, although an attempt was made to study the kind of bacteria obtained, no good idea can be obtained from cultures in fluid mediums as to the number or kind of bacteria present in healthy urine. The work of Davis[5] is more satisfactory. In a series of forty-three cases he made cultures of 1 c.c. of urine on aerobic and anaerobic blood agar plates. In thirty-eight cases, no growth was obtained. In two cases, a few colonies of colon bacilli were found. In two cases, several colonies of pseudodiphtheria bacilli grew, and in one case, gram-negative cocci developed. Leube[6] states that the vesical urine under normal conditions is free from bacteria. A consideration of the bacteriology of the urethra will explain the difficulty of obtaining sterile urine in health. Pfeiffer[7] found pseudodiphtheria bacilli in 83.7 per cent. of cases examined. Ohlmacher,[8] in eighty cases, found pseudodiphtheria bacilli in the anterior urethra in 12 per cent. It is stated[9] that *Staphylococcus aureus* and *albus* are commonly found in the urethra. Schenck and Austerlitz[10] found the female urethra sterile in one half of the sixty cases examined. In others, with few exceptions, harmless bacteria were found.

In order to find out the number and variety of organisms obtainable in health with our technic, the following cases were examined. Cultures of 2 c.c. of catheterized urine were made in deep tubes of dextrose agar; aerobic and anaerobic cultures on blood ascites agar were made from the sediment of 15 c.c. of centrifuged urine.

CASE 1.—Boy, aged 8 years, convalescing from scarlet fever. Urine was slightly alkaline to litmus; cloudy with carbonates; no albumin; sediment negative. Three culture tubes of 2 c.c. each were sterile, and a fourth tube showed one colony of pseudodiphtheria bacilli.

CASE 2.—Normal pregnancy. No casts, albumin, leukocytes or erythrocytes. Cultures were sterile.

CASE 3.—Normal puerperium. No albumin, casts, red blood cells or leukocytes; cultures gave eleven large, yellowish colonies of staphylococci in 2 c.c. of urine.

CASE 4.—Normal puerperium. No albumin, casts, red blood cells or leukocytes. The cultures were sterile.

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* Owing to lack of space, this article has been abbreviated in THE JOURNAL by omission of some of the case reports. The complete article appears in the authors' reprints. A copy of the latter will be sent by the authors on request.

1. Herrick: In Osler and McCrae: Modern Medicine, 1909, vi, 103.
2. Dick, G. F., and Henry, G. R.: Jour. Infect. Dis., 1914, xv, 85.
3. Dick, G. F., and Dick, G. R.: The Bacteriology of the Urine in Two Cases of Parenchymatous Nephritis, THE JOURNAL A. M. A., Nov. 7, 1914, p. 1661.
4. Hort: Jour. Hyg., 1914, xiv, 509.
5. Davis, Jour. Infect. Dis., 1910, vii, 599.
6. Leube, quoted in Kolle and Wassermann: Handbuch, 1914, i, 992.
7. Pfeiffer: Arch. f. Dermat. u. Syph., 1904, lxix, 379.
8. Ohlmacher: Jour. Med. Research, 1908, xiv, 109.
9. Kolle and Wassermann: Handbuch, 1914, iv, 367.
10. Schenck and Austerlitz: Kolle and Wassermann, Jena, 1914, vi, 459.

It will be seen that the results from the examinations which we made agree with the work quoted. It seems fair to assume, therefore, that by catheterization of healthy individuals, urine may be obtained which contains few or no organisms per cubic centimeter, and that these organisms will be of the types described as inhabitants of the normal urethra.

II. THE BACTERIOLOGY OF THE URINE IN DISEASES OTHER THAN NEPHRITIS

On account of the important bearing on the etiology of nephritis, the bacteriology in the diseases other than nephritis will be dealt with in detail.

A. The Specific Infections.—Because of its importance from the standpoint of epidemiology, the bacteriology of the urine in these diseases has received much attention.

Pasteur early demonstrated the excretion of anthrax bacilli in the urine of animals affected by the disease, and pointed out the danger of spreading the infection in this way. It appears settled that in the following instances either the specific organism or the virus of the disease is excreted in the urine: smallpox, hog cholera, glanders, plague, chicken cholera, erysipelas of swine, relapsing fever, pneumonia at times, tuberculosis, Malta fever, diphtheria, typhoid fever, paratyphoid fever and, according to some, leprosy. Raskay[11] found influenza bacilli in the urine following an attack of influenza. Tunnicliff[12] found streptococci in the urine at some time during the disease in twenty-eight out of fifty scarlet fever patients, and we[13] were able to demonstrate the similarity of the bacterial flora of the urine to that of the blood and the throat in the acute stage of the disease. The frequency with which Klebs-Loeffler bacilli are present in the urine of diphtheria patients is in some doubt. According to Conradi and Bierast,[14] they occurred in fifty-four cases of 155 examined. The bacilli were not numerous and occurred mostly during the first week of the disease, but were found in one case nine weeks afterward. Beyer[15] found diphtheria bacilli in all of nineteen cases examined and also in diphtheria carriers. Some cases were associated with albuminuria and casts. At least some of the bacteria were virulent. Koch[16] found diphtheria bacilli in the urine in only two of twenty-six cases examined. Both these cases were fatal.

According to Walsham,[17] Brown,[18] Walker[19] and others, tubercle bacilli may be excreted by apparently normal kidneys.

Concerning the presence of typhoid bacilli in the urine, some interesting observations have been made. McCrae[20] states that from 20 to 25 per cent. of all the typhoid urines contain the bacilli. Sometimes several hundred million are excreted per day. The appearance of bacteria in the urine does not correspond to the period of bacteremia, rarely occurring before the third week, and they may be found first during convalescence. Acute diffuse nephritis may be associated.

B. Focal Infections.—In contrast to the specific infectious diseases, we have been able to find but little concerning the bacteria of the urine in focal infections other than those of the urinary tract. The work of Kirk[21] is therefore especially interesting.

Kirk found the urine to contain bacteria in various focal infections, especially surgical wounds, and thought it of value in prognosis. He mentions the fact that in a fracture of the ulna in which staphylococci were found in the urine, the operation resulted in suppuration. Kirk also isolated pneumococci from the urine of a patient with a pneumococcus lung abscess.

We have had opportunity to make the following observations in this connection:

CASE 5.—Chronic appendicitis of two years' duration in a woman, aged 27. No albumin, casts, erythrocytes or leukocytes in the urine. The cultures gave three colonies of staphylococcus and four colonies of streptococcus in 2 c.c. of urine.

CASE 6.—Diabetes mellitus and pyorrhea alveolaris in a woman, aged 45. No albumin, casts, erythrocytes or leukocytes in the urine; 2,000 c.c. passed in twenty-four hours; 5 per cent. sugar; 2.3 gm. ammonia. The cultures gave colonies in 2 c.c. of urine too numerous to count of staphylococcus and streptobacillus. The latter was gram-positive; aerobic; mannite unchanged; lactose and dextrose, acid; milk, acid and coagulated; blood, slightly hemolyzed.

CASE 7.—Acute articular rheumatism, pyorrhea alveolaris, hyperthyroidism in woman, aged 33. No albumin, casts, erythrocytes or leukocytes in the urine. Cultures gave in 2 c.c. of urine about six colonies of streptococcus and of a bacillus which was spore-forming; mannite, lactose and dextrose, acid and bleached; milk, acid; grayish-brown, moist film on plain agar.

CASE 8.—Multiple tuberculous arthritis with chronic suppuration of one interphalangeal joint in a woman, aged 18. No albumin, casts, erythrocytes or leukocytes in the urine. In cultures from 2 c.c., numerous colonies of streptococci and staphylococci. Cultures from the suppurating joint showed staphylococcus.

CASE 9.—Chronic ethmoidal sinusitis in a woman, aged 34. No albumin, casts, erythrocytes or leukocytes in the urine. The cultures gave five colonies in 2 c.c. of: (*a*) Streptococcus in moderately long chains, aerobic and anaerobic; blood, hemolyzed; milk, acid and coagulated; dextrose, mannite and lactose, acid; colonies, pinpoint to 1 mm., grayish, translucent. (*b*) *Micrococcus catarrhalis;* gram-negative; occurring singly, in pairs or in clusters; good growth on ordinary mediums in small, translucent colonies; no change in reaction of mediums. (*c*) Pseudodiphtheria bacillus, gram-positive, pleomorphic, beaded, barred and clubbed, aerobic and anaerobic; slight hemolysis; dextrose, unchanged; milk, alkaline; growth on mannite and lactose litmus agar, blue.

Cultures from the nasal secretion showed streptococcus, similar to that of the urine, and *Micrococcus catarrhalis* as the predominant organisms.

III. THE BACTERIOLOGY OF THE URINE IN NEPHRITIS

Articles setting forth the theory of the infectious nature of nephritis have appeared frequently in the literature since 1888. Attempts to cultivate organisms from the urine have formed the basis of many of these reports. Owing to the inadequacy of the methods employed, the bacteria obtained by most workers have been saprophytes, which occur in the normal urethra.

It is significant that some observers, as Scheidemandel[22] and Lustgarten and Manneberg,[23] state that bacteria are found more frequently in smears of the urinary sediment than in cultures. These authors found streptococci repeatedly in smears when cultures were negative. It may be noted in this connection that of the organisms which we found, streptococci are the most easily recognized in smears of urinary sediment. Klieneberger[24] reports two cases of acute parenchymatous nephritis due to paratyphoid bacilli in which, on account of negative blood cultures, he thought the infection was nonhematogenous.

11. Raskay: Virchows Arch. f. path. Anat., 1913, ccxiii, 511.
12. Tunnicliff: Personal communication.
13. Dick, G. F., and Dick, G. R.: jour. Infect. Dis., 1914, xv, 85.
14. Conradi and Bierast: Deutsch. med. Wchnschr., 1912, No. 34, p. 1580.
15. Beyer: München. med. Wchnschr., 1913, lx, 240.
16. Koch, Kolle and Wassermann: Handbuch, 1914, v, 976.
17. Walsham: Tr. Brit. Cong. Tuberc., 1901, London, 1902, iii, 583.
18. Brown, Lawrason: The Significance of Tubercle Bacilli in the Urine, THE JOURNAL A. M. A., March 13, 1915, p. 886.
19. Walker: Johns Hopkins Hosp. Rep., 1904, ii.
20. McCrae, in Osler and McCrae: Modern Medicine, ii, 162.
21. Kirk: Med. Press and Circ., 1914, xcviii, 62.
22. Scheidemandel: München. med. Wchnschr., 1915, lx, 1922.
23. Lustgarten and Manneberg: München. med. Wchnschr., 1913, lx, 1778.
24. Klieneberger: Berl. klin. Wchnschr., 1914, li, 69.

Since our report of the bacteriology of the urine in two cases of parenchymatous nephritis,[3] we have examined eighteen cases, of which seven were acute nephritis and eleven chronic nephritis. These were cases of clinically typical nonsuppurative nephritis without, so far as could be ascertained, lesions of the urinary tract other than nephritis. No cases with positive Wassermann tests, or evidence of active tuberculosis, are included in the series. Catheterized specimens of urine were obtained with as much care as possible to avoid contamination. Part of this urine was sedimented at high speed (from 3,000 to 3,500 revolutions per minute), and cultures from the sediment made aerobically and anaerobically on goat's blood ascites agar or human blood agar, slants. Two c.c. of uncentrifuged urine were mixed with melted dextrose agar at 40 C. (104 F.) in deep agar tubes and incubated at from 35 to 37 C. (95 to 98.6 F.). As a rule, the examinations of these cultures were made at the end of a week or ten days. It was seldom that growth was obtained in less than forty-eight hours.

Case 10.—Scarlatina, chronic mitral stenosis and insufficiency, myocarditis, acute nephritis in a woman, aged 55. History of measles, diphtheria, pertussis, varicella, mumps, grip. Blood pressure, 130 mm.

On admission the urine was yellow, slightly clouded; 1.022 in specific gravity; containing albumin and an enormous number of finely and coarsely granular casts; some leukocytes, some small round cells, and spherical and pear-shaped epithelial cells. As patient recovered, the urine gradually became normal, and at time of discharge, there was no evidence of nephritis.

In shake cultures made with 2 c.c. of urine, the colonies were too numerous to count; they consisted of a small bacillus, gram-negative, anaerobic; growth on blood ascites agar composed of minute, transparent colonies; no change in the medium apparent; growth on ordinary mediums not obtained.

Case 11.—Diphtheria, acute hemorrhagic nephritis in a woman, aged 28. The urine was cloudy, brown; showing albumin, coarsely and finely granular casts, which were not especially numerous; some leukocytes, small round cells, spherical and pear-shaped epithelial cells, and numerous erythrocytes. The urine remained brown for a week. A catheterized specimen, taken seventeen days after the onset of nephritis and after the urine had returned to a natural yellow color, still showed in the centrifuged sediment many erythrocytes, some leukocytes, small round cells, epithelial cells, and coarsely and finely granular casts. Before the patient left the hospital, the urine had become normal. The cultures gave numerous small colonies in 2 c.c. consisting of bacilli and cocci. The bacillus was small, gram-negative, anaerobic; growth on blood ascites agar in minute, transparent colonies; no change in the blood; growth on ordinary mediums not obtained. The coccus was gram-positive; only one colony and this did not grow in transfer.

Case 12.—Diphtheria (severe), acute nephritis (mild), in a girl, aged 8 years, who had had scarlatina and measles.

On admission a few hyaline casts were found in the urine. A catheterized specimen taken two weeks later contained a trace of albumin and a few hyaline and finely granular casts, no erythrocytes or leukocytes. Four weeks after admission, the urine showed neither albumin nor casts.

Blood ascites agar slants showed a good growth of streptococci at the end of twenty-four hours. They were gram-positive, in chains of moderate length, both aerobic and anaerobic; growth on blood agar, delicate and transparent without change in the blood. Shake cultures made with 2 c.c. of urine showed in each tube several colonies of pleomorphic, gram-positive bacilli resembling in size, morphology and staining, diphtheria bacilli.

Case 17.—Bronchopneumonia; pleurisy with effusion; pyorrhea alveolaris; cardiac hypertrophy; acute exacerbation of chronic nephritis in man, aged 33, who remembered no previous illness. History of headache, two years; polydypsia; dyspnea; edema, four weeks; cough one week; vomiting two days; pain in lumbar region; coma. Blood pressure, 190 mm. The urine was voided involuntarily in small amounts; brownish in color, heavy precipitate of albumin; many hyaline, and finely and coarsely granular casts; numerous erythrocytes, fewer leukocytes; spherical and pear-shaped epithelial cells. As the patient improved, the urine increased in volume to 3,000 c.c. in twenty-four hours; specific gravity, 1.007; erythrocytes disappeared; casts persisted; albumin in twenty-four hours, 6 gm. The colonies from 2 c.c. urine were too numerous to count. They consisted of: (*a*) Pseudodiphtheria bacillus, beaded, barred and clubbed, aerobic, in grayish, translucent colonies from pinpoint to 1.5 mm. in diameter; blood unchanged; good growth on ordinary mediums; lactose, mannite and dextrose, unchanged; milk, gradually made alkaline. Eight agar slants injected subcutaneously did not kill a guinea-pig. (*b*) Streptococci, gram-positive, in short chains; better growth aerobically; dextrose and lactose, acid; milk, acid and coagulated; mannite and blood, unchanged. (*c*) Bacilli, small, anaerobic, gram-positive; best growth on blood agar; blood, unchanged; growth on other mediums slight and mediums unchanged.

Case 18.—Chronic nephritis; acute exacerbation in man, aged 35, who had been sick one week complaining of headache, edema, pain in epigastrium, vomiting, and dark and scanty urine. Heart hypertrophied. Blood pressure, 170 mm. The urine was brown, with heavy precipitate of albumin, many hyaline casts, some granular casts and erythrocytes, few leukocytes and epithelial cells. In the cultures, seventeen colonies developed from 2 c.c. of urine; streptococci in pure culture, in fairly long chains of oval, gram-positive cocci; better growth aerobically; moderate hemolysis; colonies opaque, whitish, from 1 to 1.5 mm. in diameter; dextrose, lactose, milk, acid; mannite unchanged. Growth in bouillon formed a white sediment of small, spherical colonies, leaving the fluid above clear.

Case 19.—Bronchopneumonia, arteriosclerosis, chronic nephritis in man, aged 72. Patient deaf and dumb. Wrote on paper that he had had cough and pain in chest five days. Blood pressure 180 mm. Teeth lost; slight enlargement of the cervical lymph glands; slight cardiac hypertrophy; small area of bronchopneumonia in right axilla. Urine had specific gravity, 1.021, trace of albumin, many hyaline and finely granular casts, no erythrocytes or leukocytes. No growth was obtained in dextrose agar shake cultures. On blood ascites agar slants, aerobic and anaerobic, many colonies were obtained of: (*a*) Pseudodiphtheria bacilli, gram-positive, beaded and clubbed, growing both aerobically and anaerobically; blood, unchanged; milk, alkaline; lactose, mannite and dextrose agar, unchanged; small, grayish-white, opaque, convex colonies. (*b*) Cocci, small, gram-positive, strictly anaerobic, occurring singly or in clusters; growth very delicate one of pinpoint, transparent colonies; growth on ordinary mediums good without change in reaction of dextrose, lactose, mannite, saccharose or milk; blood unaltered. (*c*) Bacilli, small, gram-negative, pleomorphic, showing clubbing at height of growth (forty-eight hours), anaerobic; pinpoint, transparent colonies on blood ascites agar without change in medium; no growth on ordinary mediums.

Case 20.—Diffuse dilatation aorta (Wassermann reaction on both blood and spinal fluid negative), extreme cardiac hypertrophy; uterine fibroids and hemorrhages; chronic nephritis in woman, aged 45. Patient denied all infectious diseases, saying that she had never been sick in her life. No headaches or edema. Blood pressure, 240 mm. About 1,000 c.c. of urine in twenty-four hours; with specific gravity, 1.016; containing albumin, a trace at times; at other times, none; hyaline casts few but constant. Cultures from 2 c.c. of urine gave from fifteen to twenty colonies of a small, pleomorphic bacillus, sometimes slender, sometimes plump; showing marked beading and clubbing at height of growth (forty-eight hours), gram-negative, anaerobic; no growth on ordinary mediums; on blood ascites agar, minute, transparent colonies; no change in the blood.

In the accompanying table the organisms on the left of the heavy black line are those found in the urine of healthy individuals. As might be expected, they were found in many of the cases of focal infection and nephritis. It is the presence of the organisms to the right of the heavy black line that indicates a variation from the normal in the bacteriology of the urine. In this group streptococci occur most frequently. These organisms were present in the urine of focal infections in four of five cases examined, and in eleven of the twenty cases of nephritis. The various streptococci were not identical, but varied considerably in their cultural characteristics. The organisms which are peculiar to nephritic urine for the most part are tendency to bizarre forms, and were often slightly larger.

IV. THE ETIOLOGIC SIGNIFICANCE OF THE BACTERIA FOUND IN NEPHRITIC URINE

The constancy with which bacteria are found in the urine of nephritics suggests at once that they may cause the disease. There are, however, two ways in which their presence might be accounted for without assuming that they produce the nephritis. First, bacteria might ascend from the urethra and exist as saprophytes in the nephritic urine, rendered a better culture medium by its serum albumin. That this is not the case is indicated by a number of observations:

THE INCIDENCE OF VARIOUS ORGANISMS FOUND IN THE URINE IN HEALTH, FOCAL INFECTIONS WITHOUT NEPHRITIS AND IN NEPHRITIS

Case Number	Diagnosis	Organisms Found in the Urine																	
		Staphylococcus	Pseudodiphtheria	Gram-positive Anaerobic Coccus	Gram-negative Spore-forming Aerobic Bacillus	Gram + Barred and Beaded Anaerobic Pleomorphic Bac.	Anaerobic Gram — Diplococcus	Strepto-Bacillus	Large Gram + Anaerobic Bacillus	Diplococcus Catarrhalis?	Gram + Spore-forming Bacillus, Aerobic	Streptococcus	Diphtheria Bac.	Small Gram + Anaerobic Bacillus	Small Gram — Anaerobic Bacillus	Spirillum	Pigment-forming Bacillus	Small Gram — Aerobic Bac.
1	Health	..	+	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Health	+	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	Health	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4	Health	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Chr. appendicitis	+	..	..	..	..	..	..	..	..	..	+	..	..	..	..	..	..
6	Diabetes mellitus, pyorrhea alveolaris	+[1]	..	..	.	..	..	+	..	..	..	..	..	..	..	..	..	..
7	Acute articular rheumatism; pyorrhea alveolaris	..	..	..	+	..	..	..	..	..	..	+	..	..	..	..	..	..
8	Tuberculous arthritis; secondary infection	+	..	..	..	..	..	..	..	..	..	+	..	..	..	..	..	..
9	Ethmoidal sinusitis	..	+	..	..	..	..	..	..	+	..	+	..	..	..	..	..	..
10	Acute nephritis	..	..	..	..	..	..	..	..	..	..	..	..	..	+	..	..	..
11	Acute nephritis	..	..	..	..	..	..	..	..	..	..	..	..	..	+	..	..	..
12	Acute nephritis	..	..	..	..	..	..	..	..	..	..	+	+	..	..	..	..	..
13	Acute nephritis	+	+[2]	..	..	..	..	..	..	..	..	+	..	..	..	..	..	..
14	Acute nephritis	+	..	..	..	..	..	..	..	..	..	+	..	..	..	..	..	..
15	Acute nephritis	..	..	..	..	+	..	..	..	..	..	..	..	..	..	..	..	..
16	Acute nephritis	..	..	..	..	..	..	..	..	..	..	+	..	..	..	..	..	..
17	Chronic nephritis	..	+	..	..	..	..	..	..	..	..	+	..	+	..	..	..	..
18	Chronic nephritis	..	..	..	..	..	..	..	..	..	..	+	..	..	..	..	..	..
19	Chronic nephritis	..	+	+	..	..	..	..	..	..	..	..	..	..	+	..	..	..
20	Chronic nephritis	..	..	..	..	..	..	..	..	..	..	..	..	+	..	..	..	..
21	Chronic nephritis	..	+	..	..	..	+	..	..	..	..	..	..	+	..	..	..	..
22	Chronic nephritis	+	..	..	..	..	..	..	..	..	..	+	..	..	+	..	..	..
23	Chronic nephritis	+	..	..	..	..	..	..	+	..	..	..	..	+	..	..	..	..
24	Chronic nephritis	..	..	..	..	..	..	..	..	..	..	..	..	..	+	..	..	..
25	Chronic nephritis	+	..	..	..	..	..	..	..	..	..	+	..	..	+	..	..	..
26	Chronic nephritis	..	+	..	..	..	..	..	..	..	..	+	..	..	..	..	..	..
27	Chronic nephritis	..	..	..	..	+	..	..	..	..	+	..	..	..	..	..	..	..
28*	Chronic nephritis	..	..	..	..	..	..	..	..	..	..	+	..	..	+	+	..	..
29*	Chronic nephritis	..	..	..	..	..	..	..	..	..	..	+	..	..	+	..	..	+

* Cases of previous report.

classed as small, gram-negative, or gram-positive, anaerobic, pleomorphic bacilli. It is impossible to say that these organisms are identical, but they at least very closely resemble one another. Gram stain was often an unsatisfactory means of differentiation, as it was not strongly positive or negative. They are cultivated with considerable difficulty. They grow without hemoglobin, but not without ascites or serum. They are strict anaerobes. It may be noted that they resemble closely the bacilli described by us in anaerobic cultures of the throat, blood and urine in scarlet fever in which nephritis is so common. In four cases these organisms were found in pure culture. Cases 15 and 27 lacked both streptococci and the small, pleomorphic organisms. The peculiar anaerobic, curved, pleomorphic, gram-positive organism found in these cases somewhat resembled diphtheria bacilli, showed more

1. In the cases in which it was tried, we found the urine itself, as obtained by catheter, a poor culture medium for the bacteria it contained.

2. It was possible in a number of cases to find foci of infection in which the bacterial flora was similar to that of the nephritic urine. One of the cases of nephritis reported previously[3] was a good example of this. A second case (Case 14) had, in the pus from the otitis media, a hemolytic streptococcus, apparently identical with that found in the urine. That the bacteria associated with focal infections are found in the urine without nephritis is shown by the work of Kirk and by Case 9 of our series of focal infections, in which the streptococcus and *Micrococcus catarrhalis* were found both in the focal infection and in the urine. The easiest explanation of this assumes that the bacteria in the focus of infection gain entrance

to the blood stream and are excreted through the kidneys.

3. The opportunity was afforded by necropsy to obtain bacteria directly from the cortex of the kidney by means of cultures of the kidney tissue. The kidney was obtained from a fatal case of diphtheric nephritis without endocarditis. The following bacteria were found: innumerable colonies of virulent diphtheria bacilli; few staphylococci, and streptococci. It will be seen that even in diphtheria, in which there is preeminently a local production of toxin and not so extensive invasion of the blood stream, bacteria were isolated in large numbers from the nephritic kidney.

A number of attempts have been made to isolate bacteria from the kidney of nephritis.

Thus Councilman[25] made cultures from forty-nine cases of acute and subacute nephritis, and found bacteria in the kidney only in cases of general septicemia. The cultural methods which he used, however (aerobic cultures on Loeffler's blood serum), were inadequate. Brewer[26] made cultures of a kidney which he removed from a case of post-scarlatinal nephritis. The cultures remained sterile after three days. He does not mention the cultural methods used. Heyn[27] described a nephritis due to tubercle bacilli in which there was connective tissue proliferation without tubercle formation. He was able to demonstrate tubercle bacilli in the lesions of such kidneys. That bacteria are found in the kidneys of fatal cases of scarlatina we were able to show in a study of the anaerobes associated with the disease.

From these considerations, and the facts presented concerning the excretion of bacteria by the kidneys in various infectious diseases, it seems most likely that the bacteria of the urine in nephritis reach the kidney through the blood stream. They may or may not multiply in the urine.

The question arises as to whether the injury to the kidney present in nephritis is the effect of the organisms found in the urine, or whether the kidney, injured from other causes, is permeable to bacteria in an abnormal degree, thus accounting for the organisms present in the urine. The following case of chemical nephritis caused by phenol (carbolic acid) poisoning helps to decide this question:

Case 30.—Hungarian, aged 27, no history obtainable, except that he took phenol. The physical examination was negative except for severe erosions of the cheeks, tongue, roof of the mouth, and the throat. The urine on admission showed many erythrocytes, some blood casts, some leukocytes and much albumin. In a few days the urine became normal. Cultures taken at the height of the nephritis yielded in 2 c.c. of urine three colonies of *Staphylococcus albus*.

The bacteriology in this case of chemical nephritis, then, resembles the bacteriology of the urine in health rather than that of the urine in other cases of nephritis. This case, although far from conclusive, would indicate that the bacteria found in nephritic urine are not simply the result of an increased permeability of the kidney. The question, then, must be considered as to whether the bacteria found in the urine are the cause of the associated nephritis, or are excreted in much the same manner as are the specific organisms of the infectious diseases. It may be stated that it is precisely in those diseases in which bacteria, or specific viruses, are frequently found in the urine that nephritis most often occurs. There is some discussion as to whether or not the passage of bacteria through the kidney with absolutely no resulting lesion is possible. In typhoid fever we have the best example of what appears to be an excretion of bacteria by clinically normal kidneys. Typhoid bacilli are usually found in the urine, not during the period of bacteremia, but later in the disease or during convalescence. Kanjajeff[28] examined the kidneys of patients excreting typhoid bacilli through clinically normal kidneys, and found small foci of necrosis under the capsule of the kidney. He obtained typhoid bacilli in culture and demonstrated the bacilli in sections from such foci. Again Wyssokowitsch[29] did not find elimination of bacteria in the urine after injection of large numbers into the blood, except when the kidneys showed evidence of injury. It must be remembered that such injury may be very small; in some cases, only such as might result from the retention of the bacteria for a short time in the kidney capillaries. Pernice and Scagliosi[30] inoculated from 0.25 to 2 c.c. of broth cultures of anthrax and *Bacillus pyocyaneus* into guinea-pigs, rabbits and dogs intravenously, intraperitoneally and subcutaneously, and observed two hours later hemorrhages and desquamation of the epithelium of the tubules and glomeruli. It is plain that while the possibility of bacteria passing through the kidney without the production of lesions is questionable, there is no doubt that such passage does frequently result in injury to the kidney, variable in extent.

V. THE PRODUCTION OF EXPERIMENTAL NEPHRITIS BY MEANS OF THE BACTERIA FOUND IN NEPHRITIC URINE

From the consideration of the effects of the passage of bacteria through the kidneys, it would be surmised that experimental nephritis in animals might be produced by bacteria, and considerable work along this line has been done.

As early as 1888, Roux and Yersin[31] produced congestion and occasional renal hemorrhage by the injection of diphtheria toxin into animals. Lyon[32] produced round-cell infiltration by injection of diphtheria toxin. Frothingham,[33] in a more recent investigation, concludes that the vessels of guinea-pigs and rabbits are not susceptible enough to diphtheria toxin to make it appear hopeful to secure permanent renal lesions with sublethal doses. Pernice and Scagliosi[30] studied the effect on the kidneys of injections of *B. anthracis* and *B. pyocyaneus* in dogs. They obtained hemorrhage and desquamation in tubules and Bowman's capsules with epithelial degeneration and the urinary findings of nephritis. They mention that injection of live bacteria is more effective than injection of filtrates. Le Count and Jackson[34] studied the renal lesions in rabbits inoculated with streptococci. They described degenerative, exudative and proliferative changes. Longcope[35] produced round-cell infiltration by repeated injections of horse serum. Le Count and Jackson emphasize the need of careful examination of control animals in studies on experimental nephritis. Dayton[36] compared the urinary and necropsy findings in dogs, in 47.6 per cent. of which he found chronic nephritis, and concluded that repeated urinary examinations would reveal the presence of such nephritis.

25. Councilman: Medical and Surgical Reports of the City Hospital, Boston, 1897, p. 31.
26. Brewer: Am. Jour. Urol., 1913, ix, 549.
27. Heyn: Virchows Arch. f. path. Anat., 1901, clxv, 42.
28. Kanjajeff, in Kolle and Wassermann: Handbuch, 1914, iii, 768.
29. Wyssokowitsch in Kolle and Wassermann: Handbuch, i, 215.
30. Pernice and Scagliosi: Virchows Arch. f. path. Anat., 1894, cxxxviii, 521.
31. Roux and Yersin: Ann. de l'Institut Pasteur, ii, 629.
32. Lyon: Jour. Path. and Bacteriol., 1903, xxviii, 430.
33. Frothingham: Jour. Med. Research, 1914, xxx, 365.
34. Le Count and Jackson: Jour. Infect. Dis., 1914, xv, 389.
35. Longcope: Jour. Exper. Med., 1913, xviii, 678.
36. Dayton: Jour. Med. Research, 1914, xxxi, 177.

Experiments were made on animals in which repeated examinations of the urine failed to reveal any evidence of kidney lesions. The animals were kept under observation in a metabolism cage. The effect of injections of each of the two groups of organisms most commonly found in nephritis was observed, that is, streptococci and small anaerobic bacilli.

EXPERIMENT 1.—Dog received an intravenous injection of the growth from six slants of the bacilli from Case 10, of scarlatinal nephritis. The growth was very sparse, clouding the fluid less than would a single slant of typhoid bacilli. The injection was followed in about one-half to one minute by vomiting, involuntary urination and defecation, convulsions and coma. The injection was made late in the afternoon. The dog died the following night. During the coma, involuntary defecation occurred, but no urination. The postmortem examination showed cloudy swelling of the liver and kidneys. The bladder was empty.

EXPERIMENT 2.—Rabbit received two injections of bacilli from Case 20.

March 24: Urine negative daily since March 18. Received intravenously the growth from six agar slants (growth very scant).

March 25: Received intravenously the growth from six agar slants.

March 26: Found dead. Early lobular basal pneumonia; urine from bladder shows a heavy precipitate of albumin (Purdy test); no casts or leukocytes. Renal capsule strips readily, leaving smooth surface. The cut surface shows the cortex light in color and bulging.

EXPERIMENT 3.—Rabbit received three injections of the bacilli from Case 20.

March 16: Urine negative. Received six agar slants intravenously.

March 17: Urine negative. Received a second injection of four slants intravenously.

March 18: Urine showed a trace of albumin and a few hyaline casts.

March 22: Urine negative. Received six agar slants. The animal died almost immediately with convulsions. Peritoneum contains 10 c.c. of clear, colorless fluid; pericardium contains 1 c.c. of similar fluid. Renal capsule strips readily, leaving smooth surface; cut surface shows cortex light in color and bulging; markings obscured. Extreme degeneration of cells of glomeruli and convoluted tubules; tubules filled with desquamated cells.

EXPERIMENT 4.—Rabbit received repeated intravenous injections of smaller quantities of organisms from Case 20.

March 26: Four slants intravenously.

March 29: Urine negative. Received four slants intravenously and one slant subcutaneously.

March 30: Urine negative. Received six slants subcutaneously.

April 1: Urine negative. Received four slants (poor growth) intravenously.

April 2: Urine negative. Received five slants (fair growth) intravenously.

April 8: Urine, twenty-four-hour amount, negative. Received five slants intravenously.

April 14: Urine: albumin and many epithelial cells; no casts found.

April 15: Urine: albumin present, no casts found.

April 16: Urine albumin present and no casts found. Received five slants intravenously.

April 20: Urine: albumin and many coarsely granular casts; no leukocytes.

April 22: Urine showed trace of albumin, many hyaline and granular casts, few leukocytes.

April 24: Received four slants intravenously.

April 26: Urine showed many hyaline casts, a few finely granular casts, no albumin.

April 27: Received two agar slants intravenously.

April 28: Single voiding showed albumin, hyaline and coarsely granular casts. The rabbit has been allowed to live in the hope of obtaining a contracted kidney.

EXPERIMENT 5.—Rabbit received intravenous injections of anaerobic bacilli and anaerobic cocci from Case 19. The organisms from this case grew very sparsely. The proctocol follows:

March 9: Urine negative. Received nine slants of mixed bacilli and cocci intravenously.

March 10: Urine negative. Received six slants mixed bacilli and cocci intravenously.

March 12: Received four slants of the bacilli and three of the cocci.

March 13: Urine negative.

March 15: Urine negative.

April 6: Received four slants of bacilli and four of cocci intravenously.

April 7: Urine contained a trace of albumin and finely granular and hyaline casts with an occasional cell attached; numerous round and pear-shaped epithelial cells, some polymorphonuclear leukocytes. Received five slants each of cocci and bacilli intravenously.

April 9: Urine: trace of albumin, hyaline casts and finely granular casts, occasional leukocytes, epithelial cells and round cells.

April 12: Received five slants each of cocci and bacilli intravenously.

April 13: Urine: albumin present and casts numerous, hyaline and finely granular with a few cells attached; one epithelial cast found.

April 14: Urine: albumin present and numerous hyaline casts; few coarsely granular casts; some finely granular casts; few red cells, leukocytes and epithelial cells.

April 15: Trace of albumin and hyaline casts.

April 16: Trace of albumin and many hyaline casts. Rabbit killed by blow on the head. Necropsy: peritoneum contained 2 c.c. of clear fluid; some fluid in pericardial and pleural cavities. Kidneys weighed 12 gm. together (weight of kidneys of control rabbit of about the same weight, 9.5 gm.). The capsule stripped readily, leaving a smooth and strikingly mottled surface on which dark brownish-red areas alternated with light yellowish areas. On cut section, the markings lost: and cortex and medulla indistinguishable, showing yellowish and reddish brown streaks through both. Microscopic examination: The most marked change is swelling and fatty degeneration of the cells of glomeruli and convoluted tubules, although to some extent all of the epithelium is affected. There is some new connective tissue proliferation, especially marked in small areas just beneath the capsule of the kidney. The Bowman's capsules and tubules contain granular débris.

EXPERIMENT 6.—Rabbit injected with streptococci from Case 18. The organisms were not toxic as were the organisms previously used, and were readily grown, so that much larger quantities were used.

March 12: Urine negative. Received one large slant intravenously.

March 15: Received one-fourth large slant intravenously.

March 16: Urine negative.

March 17: Received 10 c.c. broth culture intravenously, and 30 c.c. hypodermically.

March 18: Urine contained albumin; no casts.

March 19: Albumin and many coarsely granular casts, few epithelial cells.

March 22: No albumin; no casts.

March 23: Received 10 c.c. of broth culture intravenously and 20 c.c. of broth culture hypodermically.

March 24: Albumin: trace; no casts. Received 10 c.c. broth culture intravenously and 10 c.c. subcutaneously.

March 25: No albumin; no casts.

March 26: Urine contained a trace of albumin; no casts. Received 10 c.c. of broth culture subcutaneously and intravenously.

March 27: Found dead. The necropsy was negative except for cloudy degeneration of the liver and kidney changes. The kidneys were swollen; the capsule stripped readily, leaving a smooth, slightly mottled surface. The cut surface was soft and light colored with very indistinct markings. Microscopically, the kidney showed degeneration and desquamation of epithelium of the convoluted tubules and Bowman's capsule.

These experiments show that the bacteria isolated from the urine of nephritis are capable of producing both the urinary and the anatomic findings of nephritis. That they are capable of producing some of the symptoms of nephritic intoxication is shown by the following observation: In Case 21, the patient had complained of very severe headache and some nausea after meals for seven years. After these symptoms had subsided under treatment in the hospital, a vaccine prepared from the organisms found in the urine was injected in the hope of producing a beneficial effect. A first injection of 2½ million organisms subcutaneously was followed by headache and nausea, which the patient described as similar to those of which he had previously complained. These symptoms, which were not associated with a rise in temperature, reached their height a few hours after injection and persisted for about forty-eight hours. A second and third injection were followed by similar symptoms, so that the dose of vaccine had to be reduced, although the initial dose was small as compared with the customary dosage of vaccines of other organisms.

It has been commonly assumed that the symptoms of intoxication in nephritis are due to retained metabolic products. From extirpation experiments, Fischer[37] concludes that the loss of renal tissue is not sufficient to explain the toxic phenomena of nephritis. The toxicity of the bacteria of nephritic urine as shown by animal experiments and by vaccine is for this reason of added interest.

Though pathogenic bacteria were present in the urine of all our cases, except that of chemical nephritis, it seems unlikely that there are no cases of nephritis due to soluble toxins alone. A bacteriologic study of the urine is, therefore, of primary importance in every case of nephritis.

The excretion of bacteria through the kidneys in focal infections and in acute infectious diseases indicates that both prophylactic and curative measures in cases with positive bacteriologic findings should be directed toward (1) removal of foci of infection from which bacteria might enter the blood stream, and when this is impossible, as in the acute infectious diseases, toward (2) minimizing their action on the kidney.

Of the drugs which act as urinary antiseptics, hexamethylenamin is most efficient. Hinman[38] reached the conclusion that hexamethylenamin in 15-grain doses is of little antiseptic value at the level of the kidney, as he did not find formaldehyd in quantities sufficient to inhibit bacterial growth in urine obtained from the renal pelvis. Clinical experience, on the other hand, has demonstrated the efficiency of hexamethylenamin in freeing the urine of typhoids from the bacilli.[39]

We have already pointed out that in typhoid, the bacilli are present in foci within the kidney tissue. Considerable work has been done on the use of hexamethylenamin as a preventive of nephritis in scarlet fever. From Griffith's[40] review of the literature, it appears that most observers have found it of value; but there are those who assert that it is of no use. The discrepancy in results might be explained by failure to control the dosage by testing the urine for formaldehyd. Controlled in this way, the results in a series of cases to be reported from the Durand Hospital of the Memorial Institute for Infectious Diseases are encouraging.

The danger of hematuria might be taken as a contraindication to the use of hexamethylenamin in nephritis. It was given in Cases 10, 13, 14 and 17 of acute nephritis and in Cases 18, 21, 22, 24, 26 and 27 of chronic nephritis in this series and in the two cases previously reported. Care was taken to employ the smallest dose which gave a positive test for formaldehyd in the urine with the phenylhydrazin nitroprussid test. There were no unfavorable results, except in Case 21, when an attempt to give as large doses as the patient could tolerate was followed by vesical irritability and hematuria. These symptoms subsided on stopping the drug.

In cases of chronic nephritis with positive bacteriologic findings, the advisability of giving autogenous vaccines is naturally to be considered. It has been tried in too few cases to warrant any conclusion as to its efficacy. The effect of vaccine in Case 21 indicates that if it is employed, the toxicity of the organisms should be taken into account in determining the dosage.

637 South Wood Street.

37. Fischer, M. H.: Edema and Nephritis, New York, John Wiley & Sons, 1915, p. 493.
38. Hinman: Tr. Am. Assn. Gen. Urin. Surg., 1913, viii, 235.
39. Shattuck, in Forscheimer's Therapeusis of Infectious Diseases, New York, 1914, ii, 25.
40. Griffith, in Forscheimer's Therapeusis of Infectious Diseases, New York, 1914, ii, 133.
41. Simon: Ztschr. f. Urol., 1914, viii, 253.
1. Sorensen, S. P. L.: Biochem. Ztschr., 1909, xxi, 131.
2. Michaelis and Davidsohn: Biochem. Ztschr., 1911, xxxviii, 280.

DIFFERENCES IN THE DIGESTION IN ADULTS AND INFANTS

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The differences in the digestive process in adults and infants have been the subject of so many contributions that it would be impossible to review the literature in a paper of this length; but some recent work is of especial interest in shedding new light on this subject. We are still very ignorant of the chemical nature of the digestive enzymes, but are learning more of the conditions under which they act.

Sorensen[1] has made careful studies of the relation between the acidity or alkalinity of the solution and the rapidity of the action of different enzymes. The acidity is measured by the concentration of the hydrogen ions. The optimum concentration of hydrogen ions for peptic digestion was found to be about 0.04 normal, and the rate decreased if the acidity was increased or decreased. At about 0.0001 normal it was about a half to a fifth as rapid, and at about 0.2 normal it was about 0.9 to 0.5 as rapid, depending on the duration of the experiment and the method of analysis.

It is well known that trypsin acts better in an alkaline medium, and Michaelis and Davidsohn[2] have shown that its action decreases as the alkalinity decreases, and still more if the solution becomes acid, so that at a hydrogen ion concentration of 0.0001, it

ceases altogether. Rona and Arnheim[3] have found the same thing true of erepsin.

It occurred to me that the rate of digestion in the stomach and intestine might be studied by continuous observation of the hydrogen ion concentration. For this purpose new apparatus was perfected,[4] one method being the construction of a hydrogen electrode which could be lowered into the stomach. In this way curves were plotted of the rise in acidity in the stomach.[5] The other method consisted in the use of an Einhorn duodenal tube kept in the stomach.

Although all the determinations were made with the hydrogen electrode, the indicator method of determining the reaction was tested. When the sample was already colored, indicator papers were found to work better than the solutions. Ordinary indicator papers are not always sensitive enough. It is better to soak Schleicher and Schüll's ash-free filter paper No. 589 in a solution of the dye and dry it. In case of a natural indicator, if it will dissolve in absolute alcohol, this solution is used to color the paper in order that no salts may be transferred to the paper. The edge of the paper is touched to the solution, and as the solution rises in the pores of the paper, the coloring matters are precipitated in the pores; but the acid or alkali rises higher and gives the characteristic reaction with the indicator above the place where the color of the sample is precipitated. Pure water rises still higher; therefore the upper limit of the moist area should not be taken to indicate the reaction.

The hydrogen ion concentrations at which some indicators change the contents of the digestive tract are as follows: methyl violet and tropeolin 00, 0.01; dimethylamidobenzol, 0.005; congo, methyl orange and alizarin, 0.0001; litmus and p-nitrophenol, 0.00001; neutral red, 0.000005; rosolic acid, 0.0000005; phenolphthalein, 0.00000005.

It was found that the heavier the meal and the more protein it contained, the more slowly the acidity rose. After the average meal, however, the acidity rises rapidly during the first hour, more slowly during the second hour and remains about stationary during the third, fourth and fifth hours. During the first hour very little peptic digestion can take place, and the most rapid digestion is delayed until from two to three hours after finishing the meal.

The acidity curve is thus an index of the efficiency of the stomach to take care of a meal, and a whole hour is saved by the ability of the stomach to raise the acidity an hour sooner. The acidity rises to its maximum an hour sooner in some stomachs than in others, and these stomachs are emptied through the pylorus sooner than the others, and hence made ready for another meal.

This brings us to the question of the infant's stomach, and it was investigated at the request of Dr. Sedgwick in the same way so far as was practicable. In this work Dr. Rood Taylor assisted, and collected all samples. The acidity of the infant's stomach (of the first month) remains nearly stationary during the first hour, after which it rises steadily until the next meal, and if this is delayed four hours it may become as acid as the adult stomach. The question arises as to what this has to do with the digestion. The milk does not wait to be digested before passing out of the stomach, and when the acidity is high enough for protein digestion, there is little milk in it to be digested.

A study of the duodenal contents offers a suggestion in explanation of this anomaly. The duodenal contents are more acid than the full stomach, the hydrogen ion concentration being about 0.0008, despite the presence of bile and pancreatic juice. At this acidity, considerable peptic digestion could take place, according to the careful studies of Sorensen. Pepsin was looked for and found to be always present in the infant's duodenum. In determining this, 0.1 c.c. of duodenal contents was mixed with 2 c.c. of a dilute solution of edestin kept slightly acid with a phosphate mixture, and incubated for two hours at 37 C. (98.6 F.). At the end of that time the undigested edestin was precipitated with a few drops of a saturated solution of sodium chlorid. A precipitate was observed only in the controls, however, owing to the rapid peptic digestion.

Trypsin was likewise determined, by the digestion of a dilute alkaline solution of casein for twenty-four hours in an incubator. It seemed to be much less abundant than the pepsin, however, from the fact that the casein was not always completely digested in twenty-four hours; but some undigested casein could be precipitated by neutralization of the solution with acetic acid.

The reaction of the duodenal contents of the infant is such as would allow peptic and tryptic digestion to occur simultaneously, and the question arises, whether or not this reaction is maintained in the ileum. Owing to our inability to obtain intestinal juice, comparative data must be used in this discussion. The feces of the infant are acid,[6] and it is simplest to assume that the intestine is acid all the way down rather than that it is first acid, then alkaline and then acid again. Furthermore, it is chiefly the pancreatic juice that makes the adult intestinal contents alkaline (Boldyreff). The adult duodenal contents are alkaline, notwithstanding the highly acid fluid coming down from the stomach. I found the hydrogen ion concentration of the adult duodenal contents to be about 0.00000002, and it was not made acid by pouring in a fair proportion of gastric juice. This is about the same alkalinity as found by Auerbach and Pick[7] in the intestine of dogs, and seems to be characteristic for the adult mammalian intestine. The content of the common bile duct is a fluid like a carbonate solution, whose reaction is not easily changed, and which gives the characteristic reaction to the contents of the small intestine. The same reaction is characteristic of the feces according to Michaelis.[6] The production of bile in the infant is very small, and is not nearly sufficient to neutralize the gastric juice; consequently it is probable that all of the digestion in the infant takes place in an acid medium.

It is well known that the infant's stomach is especially rich in lipase. In addition to the lipase in mother's milk, the stomach secretes lipase. I found the fat-splitting action of the duodenal contents of the infant to be as great in an acid medium as in an alkaline medium. A saturated solution of tributyrin was used, and the digestion determined by measuring the surface tension with a stalagometer. This test is very

3. Rona and Arnheim: Biochem. Ztschr., 1913, lvii, 84.
4. McClendon, J. F.: New Hydrogen Electrodes and Rapid Methods of Determining Hydrogen Ion Concentrations, Am. Jour. Physiol., July, 1915; A Direct Reading Potentiometer for Measuring Hydrogen Ion Concentrations, ibid.
5. McClendon, J. F.: Acidity Curves in the Stomachs and Duodenums of Adults and Infants, as Plotted with the Aid of Improved Methods of Measuring Hydrogen Ion Concentrations, Am. Jour. Physiol., July, 1915.
6. Michaelis: Die Wasserstoffionenkoncentration, Berlin, 1914, p. 112.
7. Auerbach and Pick: Arb. a. d. k. Gsndhtsamte, Berlin, 1912, xliii, 133.

delicate, and if any difference existed, it should have been detected. The failure to find a difference indicates that the lipase coming from the stomach is so abundant as to make the detection of pancreatic lipase in the mixture difficult. At any rate, the fat-splitting action of the duodenal contents is very rapid in an acid medium, and since there is no starch to be split, there is no reason to suppose that an alkaline reaction is necessary for the infant's digestion.

Since the infant may some day become a man, the question arises as to what becomes of the digestion in the transition process. We observed that the infant's duodenum is not too acid for tryptic digestion, and therefore, when the acidity of the intestine in the growing child decreases so that peptic digestion can no longer take place, it is still equipped with an efficient agent for proteolysis.

The study of the acidity of the stomach during this transition period was begun by Huenekens.[8] He found that the acidity of the infant's stomach remained low at least five years if it was fed on milk, but on a mixed diet excluding milk and including meat, the acidity of the 17-months-old infant is sufficient for peptic digestion. The proteins of the milk bind and partially neutralize the acid. My results indicate that no stimulus is necessary for the secretion of acid, but the question could not be decided without finding some means of estimating the total quantity of acid secreted, which cannot be done by the titration method unless carbonates and phosphates and proteins are entirely excluded from the stomach.

Since writing this paper I have read that of Rehfuss, Bergeim and Hawk[9] describing acidity curves by the titration method. Their curves rise more rapidly and then fall. The rise is probably due to the use of the Ewald meal with low acid binding power, and the collection of the sample next to the wall of the stomach. The fall may be due to the regurgitation of duodenal contents. My curves are not complete, and hence show no fall at the end.

SUMMARY

The acidity of the stomach and reaction of the duodenal contents was measured by means of hydrogen electrodes. Indicator papers were calibrated so that clinicians may determine hydrogen ion concentrations approximately.

After a normal meal, the acidity of the adult stomach reaches its maximum in from two to three hours, the rise in acidity being more rapid the lighter the meal.

The height to which the acidity rises varies with the individual, the highest observed in a normal individual being 0.1 normal (about 0.4 per cent. of pure hydrochloric acid). The hydrogen ion concentration of the duodenal contents is 0.00000002 normal. This is slightly alkaline, since that of pure water is 0.00000011 at 25 C. (77 F.).

The acidity of the infant's stomach rises slowly after the milk begins to leave it, and four hours after nursing may be the same as some normal adult stomachs. That of the gastric juice of the new-born is 0.005.

The acidity of the duodenal contents of the infant is 0.0008, and hence it is probable that both peptic and tryptic digestion take place in the intestine of the infant. Pepsin was always found and was apparently more abundant (active) than the trypsin.

8. Huenekens: Ztschr. f. Kinderh., 1914, xi, 297.
9. Rehfuss, M. E.; Bergeim, Olaf, and Hawk, P. B.: Gastro-Intestinal Studies, II, The Fractional Study of Gastric Digestion, The Journal A. M. A., Sept. 12, 1914, p. 909.

AUTOSERUM THERAPY IN THE TREATMENT OF PSORIASIS AND OTHER SKIN DISEASES *

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Stimulated by the striking results recently obtained by Gottheil,[1] and partially confirmed by Fox[2] and Hilario,[3] in the treatment of psoriasis by autoserum therapy, a careful trial was given to this method of treatment during the past winter at the Johns Hopkins Dispensary.

Previous to Gottheil's articles in 1914, autoserum therapy had been used spasmodically in Europe in different cutaneous diseases with greatly varying results. References to this literature are given in the articles mentioned in the preceding paragraph.

TECHNIC

We used the same general methods in all of our cases. From 80 to 100 c.c. of blood were withdrawn, usually from a vein at the bend of the elbow, and centrifuged as soon as it had clotted. From this amount of blood, from 25 to 45 c.c. of serum were obtained and immediately injected intravenously into the patient. A period of from three quarters of an hour to two hours elapsed from the time the blood was withdrawn until the serum was injected.

The great difference in the time required for the treatment is accounted for chiefly by the way the blood acted during centrifugalization. The blood from one patient would require only from five to ten minutes to separate, giving a fine clear serum; whereas another patient's blood would not give an equally good serum after an hour or more. This difference was observed with bloods which were put in the centrifuge at the same time, showing that it could not be due to any mechanical defect in that instrument. The amount of fat in the serum, which causes it to be cloudy when the blood is drawn shortly after meals, did not seem to bear any relation to the time necessary for this operation. The bloods of the three cases of dermatitis herpetiformis were remarkable for the rapidity with which a clear serum separated, the time required never being over fifteen minutes, and sometimes only five minutes was necessary. On the other hand, the blood in the three cases of eczema separated with great difficulty, and it was almost the rule that after an hour or more the serum was still not clear. In the cases of psoriasis no constant rule was observed, but the blood of individual cases usually acted the same at the different treatments.

The following dermatoses were treated: psoriasis, 10 cases; eczema, 3 cases; dermatitis herpetiformis, 3 cases; chronic urticaria, 1 case; lupus erythematosus, 1 case. These cases were all given four or more injections. A number of other patients were given only one or two injections, but as they did not give the treatment a fair trial, they are not included in this report.

* From the Dermatological Clinic of the Johns Hopkins Hospital.
1. Gottheil and Satenstein: Med. Rec., New York, 1914, No. 14, p. 620.
2. Fox, Howard: Autogenous Serum in the Treatment of Psoriasis, The Journal A. M. A., Dec. 19, 1914, p. 2190.
3. Hilario: Jour. Cutan. Dis., November, 1914.

PSORIASIS, TEN CASES

The summary which we have given of these cases shows their general character in regard to duration, distribution, etc., so that it is not necessary to go into the detailed history of each of them.

All cases except one were given four injections of serum at intervals of four days to a week, during which time no other treatment was given. Immediately after the last injection the patient was put on chrysophanic acid ointment and carefully watched. Usually two strengths of the ointment (1 per cent. and 10 per cent.) were given to the patient to be used on corresponding sides of the body in order that any difference in their efficiency might be noted. In no case was the difference in result marked; in some patients the 10 per cent. ointment would give slightly better results, and in others the 1 per cent. would be more efficacious.

While receiving the serum injections, none of the patients improved and several became somewhat worse. After being put on chrysophanic acid ointment, some of the cases cleared up fairly rapidly, while the others were very obstinate, in this way acting as any other series of psoriasis cases would act which had been treated with chrysophanic acid alone. Indeed, other cases of psoriasis, treated, during this same period, with chrysophanic acid alone, did as well if not better than the cases treated with the combined serum and chrysophanic acid; this is all the more true if we consider the time lost in giving the serum.

One of the series was a private case of a rather severe type, which, after seven injections, even with the use of chrysophanic acid ointment, did not markedly improve. The others were all dispensary patients, selected on account of their intelligence and ability to cooperate in the treatment.

Autoserum therapy in the treatment of psoriasis was, in our experience, very disappointing. It is of interest to note that in two cases pigmentation followed after the lesions cleared up, and in two other cases the glans penis was involved. This is a rather high percentage for either of these conditions.

ECZEMA, THREE CASES

Here are included two cases of eczema of the male genitalia and one case of fissured eczema of the hands. They were also given at least four serum injections at intervals of from four days to a week.

One case was quite severe, the lesions having been present for two years and involving the pubic region, penis, scrotum and inner surface of the thighs. These parts were somewhat crusted, reddened, infiltrated and at times weeping. The patient had been previously treated in the dispensary for some months without much benefit. October 20, 37 c.c. of serum were injected, and an ointment of salicylic acid and oil of cade was used. November 4, the condition was about the same; 35 c.c. of serum were injected. November 9, the patient was no better; 38 c.c. of serum were injected. November 16, the patient was somewhat better. He was told to bathe the parts gently every two days, after which to apply the following ointment; salicylic acid (4 per cent.) and zinc oxid (12 per cent.); also 38 c.c. of serum were injected. November 23, the patient said he was better than he had been for two years; the parts were almost clear; the scrotum was somewhat leathery; 42 c.c. of serum were injected. December 10, the patient was still better; the scrotum was slightly leathery; no serum was injected or ointment given. November 16, the patient was slightly worse; salicylic acid and zinc oxid ointment were again prescribed. December 28, the patient was better after using the ointment again. January 14, he was still practically well, but gets worse if bathing and the ointment are withheld.

SUMMARY OF PSORIASIS CASES

Case	Sex*	Age, Yrs.	Total Duration	Duration of Present Attack	Distribution	Type	General Health	Remarks
1	♂	34	5 years	1 year	General, numerous lesions	Chronic	Very nervous; otherwise good	Obstinate case.
2	♀	28	20 years	4 weeks	General, numerous lesions	Chronic	Good	Cleared up fairly rapidly.
3	♀	34	6 years	.....	General, fairly numerous	Acute	Good	Cleared up fairly rapidly.
4	♂	26	12 years	Never entirely free	General, chiefly on legs and back	Chronic	Good	Obstinate on the legs.
5	♂	25	15 months	3 months	Scalp and a few lesions on abdomen	Acute	Good	Sites of old lesions were pigmented.
6	♂	31	3 years	8 months	General, numerous lesions	Acute	Good	Sites of old lesions were pigmented.
7	♂	21	4 years	Never entirely free	Scattered lesions on back, a few on chest and scalp, corona of glans penis	Acute	Good	Cleared up rapidly.
8	♂	22	2 years	4 months	Scalp, elbows, scattered lesions on body; patches on legs	Chronic	Good	Patches on legs very obstinate.
9	♂	20	2 months	2 months	Scalp; about half dozen spots on body; glans penis	Chronic	Good	Scalp involvement of chronic type and very obstinate.
10	♂	14	5 months	5 months	General, numerous lesions	Acute	Good	Cleared up rapidly.

* In this column, ♂ denotes male, and ♀ female.

This very chronic case was markedly improved, but it is a question whether it was due to the serum or to the more careful local treatment.

The other two cases of eczema, which were treated in a similar manner, had not been seen by us before. They were improved only when the serum injections were supplemented by local treatment.

DERMATITIS HERPETIFORMIS, THREE CASES

One of these cases, a strong healthy farmer boy, aged 18, and a private patient, came under observation during his first attack in the spring of 1914. The eruption was papulovesicular and was generally distributed over the whole body and face. At this time the usual lotions, ointments, vaccines, etc., together with baths and diet, were used by Dr. Gilchrist, with no results. Finally he tried injections into the buttock of 10 c.c. of the patient's whole blood. After the second of these injections very marked improvement occurred. During the summer of 1914, these injections were continued at intervals of a week by Dr. Ketron, with the result that the eruption practically disappeared and the patient had great confidence in the treatment. In January, 1915, the patient had a mild relapse and was then referred to me. During the next three

months ten serum injections were given. During this time the disease was present in a very mild form, only an occasional group of excoriated papules being seen. However, as soon as the warm weather of spring arrived and the patient became overheated by hard work, a very acute outbreak occurred, while he was still receiving the serum injections. This eruption was of general distribution and of a macular erythema multiforme type. Dr. Gilchrist considers that the striking improvement which took place in this case while being treated by him and Dr. Ketron was definitely due to the whole blood injections.

A second case was that of a man aged 70, who had suffered intensely with the disease for fourteen years. Six weeks after the second injection, the patient's body was clear and he said he was better than he had been for fourteen years; this statement was borne out by his family and physicians who had treated him for at least a part of that period. During the six weeks' interval, however, the patient had passed through an attack of erysipelas. It is well known that, during an acute infection, a chronic condition will very often clear up. This might have been the cause of the great improvement in this case. However, he again became gradually worse even under treatment, and at the time of the seventh injection, two months after the period of great improvement, his condition was about the same as when first seen.

The third case was in a man aged 59, who had suffered from the disease for one year. His body was covered with numerous oozing surfaces, varying in size from a pea to a bean, which represented the bases of ruptured vesicles. After the first injection there was a most marked improvement, both objectively and subjectively. However, although he was given an injection every week, he became gradually worse, and finally his condition became such that he could not come for further treatment.

It is to be noted that all of these cases of dermatitis herpetiformis were at first markedly improved, but they, also, all relapsed while under treatment. Also, these patients were themselves enthusiastic at first over the treatment. Our results were not such as to impress us as to the efficiency of serum injections in cases of dermatitis herpetiformis, although they seemed to relieve the symptoms at first.

CHRONIC URTICARIA, ONE CASE

This had been present in a man, aged 24, for over a year. Wheals were almost continually present, sometimes in very large numbers. There was no improvement after four injections at weekly intervals.

LUPUS ERYTHEMATOSUS, ONE CASE

A dozen or more rather acute lesions, varying in size from a pea to a quarter, were present over the face and neck. After one injection there was marked improvement. However, seven more injections were given with no result, and the condition slowly became worse.

CONCLUSIONS

As a result of treating carefully and observing the effects closely in ten typical cases of psoriasis, we have come to the conclusion that autoserum therapy is of no significant value in the treatment of this condition. Neither have we been able to confirm the claims, so enthusiastically made by other authors, relative to the increased efficiency of weak chrysophanic acid ointments when used after the patient had already received a series of autoserum injections. Other patients, treated by us with 1 or 2 per cent. chrysophanic acid alone, did just as well as those receiving the combined autoserum and chrysophanic acid, and thereby saved the time necessary in giving the autoserum injections.

In one very chronic case of eczema, which had been treated by us without the serum with poor results, the patient practically recovered when the serum injections were used. However, the improvement began only after the local treatment was changed; bathing was especially efficacious in this case.

Three patients with dermatitis herpetiformis improved markedly after one or two injections, but all sooner or later relapsed while under treatment. As this disease is considered a nervous manifestation, the early improvement might possibly have been due to mental suggestion.

In one case each of chronic urticaria and lupus erythematosus, we obtained no results.

While our series of cases is small, nevertheless each case has been carefully watched over a considerable period. We, therefore, feel justified in stating that autoserum therapy cannot have any very marked permanent effect in the dermatoses here considered. In the three cases of dermatitis herpetiformis, however, a marked temporary effect was obtained.

It is a point of considerable interest that the serum should separate very rapidly in the three cases of dermatitis herpetiformis and very slowly and poorly in the three cases of eczema.

TREATMENT OF BURNS OF THE EXTREMITIES

WITH SPECIAL REFERENCE TO THE PREVENTION OF DEFORMITIES AND PRESERVATION OF FUNCTION

CHARLES A. PARKER, M.D.
CHICAGO

It is a common observation that great deformities and serious interference with function frequently follow extensive burns of the extremities, especially when they involve the regions of joints. Burns of the axillary region leave the contracting scars that draw the arm against the body, preventing more or less completely abduction of the affected member. Burns of the groin cause flexion of the hip on the body. Burns about the elbows and knees produce only flexion deformities, as the flexors practically always overcome the contractures on the extensor surfaces. With the wrist and fingers the same general rule holds true that burns on the extensor surfaces produce much less interference with function by scars in these regions. Scars following burns at the ankle are more likely to produce equinus than calcaneus, and lateral deformities are apt to be caused. Burns of the feet and toes are likely to be less serious on account of their deformities than on account of the scar tissue interfering with the normal weight-bearing function.

Deep burns involving muscles, joint structures and bones, or causing complete loss of members, from the very nature of the primary injury, can offer only such imperfect recoveries as are compatible with similar destruction of tissue from other causes. Here the destruction is so great that the muscles and joints are no longer adapted to their proper functions, and even amputation itself may be necessary.

It is intended, rather, in the present discussion to consider the treatment of such burns of the third degree involving the limbs and their connections with the body, that besides destroying more or less extensively the skin over the affected region, leave the

deeper structures comparatively intact and ready to resume their functions when the surface is healed. I believe that *in this class of burns, however extensive they may be, as long as they are compatible with life, healing may and should be obtained without deformity and with good function.*

The sweeping character and the far-reaching importance of this declaration become strikingly apparent when we consider the many distorted and often useless limbs which result from extensive but superficial burns, that is, limited practically to the skin and its subjacent tissues, constantly coming to the surgeon for relief. And, too, the particularly unsatisfactory results of the treatment of the contractures of burns adds further emphasis to the supreme importance of their prevention.

The healing process in extensive burns, in spite of the various proposed methods of treatment, is usually a long one with the development of much scar tissue whose subsequent contraction is the ultimate cause of the deformity. In general, the longer the time of healing, the greater the amount of scar tissue; and the greater the amount of scar tissue, the greater the ensuing deformity, provided the situation is favorable for its development. As a corollary, the shorter the time of healing, the less severe is likely to be the resulting deformity.

From any and all standpoints, rapid healing is to be desired. This is of prime importance, and may be enhanced by various forms of skin grafting and local measures.

In extensive burns, however, at the best the time is often long and much scar tissue is formed. And here comes in the second principle of treatment, the prevention of contractures in the developing scars. These two factors, the rapid healing of the burns and the prevention of contractures in the developing scars, while in themselves suggesting nothing more than a common desire, when combined in the proper manner produce such gratifying results that the method should supplement or replace all previous methods of treatment where limbs are involved and contractures may occur.

Fig. 1.—M., Sept. 24, 1913, showing extent of burn.

Fig. 2.—M., Oct. 8, 1913, showing method of applying adhesive plaster.

Fig. 3.—M., Oct. 18, 1913, showing completed dressing with removable plaster-of-Paris splint.

To exemplify: In burns involving the whole thickness of the skin there is a slough to be thrown off before much healing or epidermization can occur. This may take two or three weeks or even longer. Most of the healing is delayed until this is accomplished.

This stage cannot be greatly shortened, as the separation comes from below as a natural reaction of the tissues. The cutting away of all sloughs over an extensive wound, as advocated by some, is a serious additional shock and not a safe rule of practice; nor is there logical evidence that it prevents the toxemia against which it is aimed.

Such dressings may be applied as are most easily changed and cause the least disturbance to the patient. I am inclined to use the plain wet dressing to facilitate the progress in this stage.

After the slough comes the aggressive treatment. Here the skin grafts can be used, and with varying degrees of success. Where they are successful, the first factor in the treatment is easy of accomplishment. How frequently, though, this is not effective either from lack of material or inability to provide a proper surface on which it may grow. These become the uninteresting hospital cases doomed to shifting services and an interminable round of experimentation with new and old methods and measures.

Continuous healing can be obtained in these cases and cures effected in very reasonable periods of time, when we compare them with similar instances requiring several years of treatment.

When the slough is removed, it is my practice to treat the wound, an ulcer, with adhesive plaster strips until it is finally healed. This does not interfere with skin grafts that can be laid under the strips if desired, but is used principally where grafting is inefficient or cannot be used, that is, in the large class of burns left wholly or partially without an epidermal cover. It is to the healing of these burns that I wish to give most of my attention, the healing of an ulcer following a burn.

Tissues grow only with heat and moisture. For practical purposes, a dry cell is a dead cell. The epidermis protects the soft structures beneath by its rela-

tive impermeability. A scab formed of dried serum, cells and bacteria is a good protection only when it is impervious and keeps the subjacent parts warm and moistened in their own serum. Over large surfaces it accomplishes this very incompletely, every movement breaking it, exposing more tissue to drying and death, and becoming itself eventually a prey to saprophytes with irritation of the tissues. It is a slow and unsatisfactory, if persistent, method, and accompanied by the largest amount of scar tissue with its accompanying contracting tendencies. It may be the only practical method of treatment in many types of burns, but is far from being the best where the adhesive plaster can be applied.

METHOD OF USING ADHESIVE PLASTER

To illustrate, let us take the case of a boy who, as part of his burn, had complete circular loss of the skin on the left leg from the groin to the ankle except an area above the knee about the width of a finger (Figs. 6, 7 and 8).

Fig. 4.—M., Nov 19, 1913, showing progress of healing.

Fig. 5.—M., Jan. 21, 1914, showing extent of healing and the abducted position of the arm.

After separation of the slough, ribbons of adhesive plaster from 1 to 1¼ inches wide and long enough to encircle the limb and lap slightly were placed around his limb from ankle to perineum, leaving no granulations exposed. To be more explicit, the first band was put around the ankle partly on good skin and partly on the burn, and the ends overlapped an inch or so. The next strip slightly overlapped the upper border of the first one, just enough to keep it from slipping on the wet tissues, and was carried around the limb like the first one. The third followed the second in a similar manner and so on till the area was entirely covered and had enough stability to stay in place and serve its function in keeping in the serum and preventing cells dying from dryness (compare Fig. 4). Over this were placed several layers of gauze to take up the secretion that worked out through between the strips at various places, although no arrangement was made for drainage. At first narrow strips were left open for drainage; but the granulations quickly occupied these areas, became exuberant and bled, and otherwise interfered with the healing; so the spaces were dispensed with entirely, with a much smoother course to the healing. Every day the gauze was changed as it became soiled. Twice a week—on my visiting days—the adhesive plaster was changed. This was easily accomplished by getting the blunt point of scissors under it at one end of the leg and cutting across all strips from the bottom to the top or the top to the bottom of the leg, when the plaster would fall from the leg as it was not adherent to the moist, or granulating surface.

Just here is where the first shock comes to the novice in this method. Of course there is a flow of pus from inside the plaster when it is opened, but there is very little left remaining on the limb as it is so fluid it comes off with the plaster and drops from the limb itself. Such as remains on the healthy skin is sponged off and the plaster is renewed in the same manner as it was first applied. Antiseptics must not be used in any manner that might result in their touching the wound itself, for they can only do harm in destroying new epidermal and other cells that are so necessary for healing. The wound will always remain infected and must be healed under that condition rather than abused under the impression that it can only be healed when aseptic or approaching an aseptic condition.[1]

The adhesive plaster on convex surfaces absolutely prevents the development of exuberant granulations, thus allowing a continuous growth of epithelium from the margins. This mechanical effect is an important one, as any one who has had to control this condition knows. It does not adhere to the exposed surface, which is always moist, so that it can be removed with the least injury to the new tissues, bleeding rarely occurring. It prevents tissues growing into the mesh of gauze with the consequent pain, blood and loss of valuable cells on removal. The ease with which it can be applied and removed is no small matter in the care of large burns, as the dread and pain of changing dressings materially reduces the resistance of the patient, particularly of children, and may easily be the determining factor for recovery or death.

The danger of absorption of pyogenic products, I believe, is no greater than in other forms of treatment, as under a complete scab, the most effective condition for natural healing, there is the same closed container around the affected area. On the other hand, the pressure of the strips in all probability controls the amount of secretion to some extent by its direct pres-

1. Drops of serum obtained from the surface of such a burn a few minutes after the removal of the adhesive plaster have been examined microscopically without showing microbic content, and cultures from similar droplets have remained sterile; so that although this is by no means always the case, it does show the striking propensity of the tissues to take care of themselves when put into the best physiologic condition for resistance.

sure effect on osmosis. Surplus secretion is not a necessity of healing; it is only an incident; and its prevention is more conservative than supplying continuous means for its removal.

I have written thus at some length and detail on this phase of treatment, as the rapidity of healing is an important factor in the control of the subsequent contractures.

THE PREVENTION OF CONTRACTURES IN DEVELOPING SCARS

This is another instance of curing by prevention. The burned areas show little or no tendency to contractures previous to healing or epidermization, but contractures rapidly develop with epidermization and may be very extensive and deforming by the time the whole area is healed. These contractures can be prevented by holding the limbs in the proper positions constantly during the long stage of healing and for several months thereafter. As a general rule, the limbs should be held with all joints in extension, the arm abducted from the shoulder, the elbow, wrist and fingers extended and the lower limb in a straight line with the body, the ankle at right angles to the leg and the toes extended.

Fig. 6.—R. O., Sept. 24, 1913, showing condition of burn after three months' treatment.

Fig. 7.—R. O., Nov. 5, 1913, showing removable plaster cast applied to prevent contractures after application of dressing.

Burns on the extensor surfaces only seldom cause deformities or much limitation of motion, and give much less concern in treatment; yet they heal much more rapidly when kept free from motion. In fact, *fixation is one of the most important factors in securing rapid healing.*

Plaster of Paris has served my purpose for fixation of any part of a limb.

After a burn is completely dressed, as mentioned in the earlier part of the paper, a circular plaster-of-Paris splint is applied with the limb in the desired position. When this is hard, it is cut into halves or in such manner that it can be removed for dressing after which it is reapplied and thus used throughout the healing, if it is six months or a year or more. For the shoulder and axilla, a cast around the body with an extension laterally and upward for the arm was used effectively throughout a period of six or seven months. The arm piece had a removable upper portion, and the body piece was opened on the side opposite the abducted and extended arm. This was easily removed for dressings and reapplied after its completion. For burns of the groin, the body and affected limb should be similarly controlled during the healing.

Fig. 8.—R. O., Sept. 2, 1914, showing healed burn with straight leg.

In the case of H. M., both of whose legs were involved with almost complete loss of skin from the ankles to the perineum, the healing took place in about five and one-half months, the child in the meantime passing through a severe attack of scarlet fever.

This child wore casts at night for several months after leaving the hospital. His gait was natural, as the legs remained extended and flexible, but flexion could only be made to near a right angle, as the thickened tissues folded up behind the knees interfered with further movement in that direction.

The little girl, M., was extensively burned on the right chest, shoulder and upper arm, involving the skin of the elbow. The chest area measured about 10 by 10 inches.

The effect of six and one-half months' treatment is seen in the successive photographs (Figs 1-5) with the position of the arm in abduction. The entire arm had healed, the top of the shoulder, most of the side and part of the axilla, when an attack of chickenpox completely destroyed resistance, some skin was lost and the child died. The pictures preserve the evidence of what had been accomplished, and show the method.

A boy, A. S., had been treated about three and one-half years for an extensive burn of the right leg, when he came under my care in January last year, with coarse cordlike scars behind the knee, forming an inelastic contracture of about 30 degrees, and a disturbing toe drop. The entire region of the knee cap and a surrounding region about 3 inches in diameter were granulating and had never been healed. With local adhesive plaster dressings and a series of casts, the limb was entirely straightened in the course of two or three months, when a tenotomy was performed to bring up the foot, which was then held straight in plaster. The entire region, which was very slow in healing, was completely covered with firm epidermal covering Sept. 7, 1914.

The boy R. O. (Figs. 6-8), came into the Children's Memorial Hospital, June 28, 1913, and was entirely healed Sept. 2, 1914, with complete extension of the knee and enough flexion for all practical purposes. He will wear a night splint for a while till we believe we are safe from a recurrence.

All of these cases had skin grafts which started out well but often melted entirely away after existing for a week or two. As a matter of fact, most of the healing has been done from the edges and must of necessity have been quite continuous to cover such large areas in such comparatively short periods of time. The areas of complete destruction of skin in the left leg of R. O. must have been at least 180 square inches, as the affected part of his leg measures 20 inches long by an average circumference of 9 inches, all of which was entirely denuded except an area about as wide and half the length of the index finger just above the patella. This boy had other extensive burns on the buttock and the leg which healed meanwhile.

The scars in all cases treated from the start have remained comparatively flexible and thin, and there has been no evidence of contractures throughout the healing process and in the months that I have observed them afterward. I have not a large number of cases to report, rather, principles which I believe can be supported; and, if they can be, it puts a new responsibility on us, as we must in the future in the presence of such knowledge regard the severe contractures of limbs following the class of burns described at the outset of the paper an evidence of neglect of proper

measures of treatment, either on the part of the physician or the patient or the one in control of the case.

The illustrations show the methods of applying dressings and casts and the burns in various stages of healing.

7 West Madison Street.

EXPERIMENT IN RESPIRATION

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In the course of some experiments in respiration bringing out the theories advanced by Yandell Henderson, an undergraduate student in the University of California Medical School held his breath ten minutes.

This was accomplished while having the student lie on a table, with a pneumographic belt attached about his thorax and communicating with a kymograph.

Slow, deep inspirations were taken for two minutes; this eliminated a good portion of the carbon dioxid from the blood. A breath of oxygen was then taken and the time marker started. The tracing is here shown. A slight relaxation of the respiratory muscles is indicated at two minutes. No desire to breathe was experienced until six minutes had elapsed. The

Tracing of experiment in respiration.

belt having been placed over the diaphragm, the pulse rhythm is shown throughout. From this time on, the conscious effort to hold the breath increased until an involuntary twitching of the abdominal muscles was quite apparent; but no respiration took place. All the time the pulse was full and strong, the color good. No oxygen want appeared.

At the expiration of ten minutes some vertigo occurred and the impulse to breathe having become imperative, the first inspiration was taken—ten minutes and ten seconds having elapsed. No great hyperpnea, no weakness, no heart changes appeared. The student rose from the table and went about his class work. Mr. Horner, on whom this experiment was tried, is a swimmer and has participated in underwater contests. So far as I know this is the longest period of voluntary suspension of respiration on record.

Good Air.—It is quite clear that the principal thing which makes the air of confined spaces harmful, aside from the special problems presented by dust and fumes, is overheating, especially when combined with excessive moisture. Any temperature over 70 F. puts a strain on the heat-regulating mechanism of the body, keeps the blood in the skin away from the vital organs, and produces far-reaching impairments of the efficiency of the nervous system, the digestive system, and the body as a whole.—Winslow.

BLOOD CHANGES IN WORKERS WITH THE ROENTGEN RAY, AND APPARATUS FOR PROTECTION

PRELIMINARY REPORT *

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It is generally known that workers with the Roentgen ray are exposed to danger. Just how much the danger is, and just how protection can be best secured, still remain a problem. With the recent popularity of the fluoroscopic method of examination, the danger to the operator becomes more serious.

The majority of roentgenologists know relatively little about the systemic and blood changes to which they are exposed, because they do not want to know about them. Complete protection probably cannot be attained by any of the known methods. Adequate relative protection, however, can be accomplished with proper modification of the apparatus as it is now used. The problem is a twofold one: protection against, first, the primary ray, even though it is filtered, and second, the secondary ray, which is present in appreciable amount in all parts of the room.

Experiments have shown that in normal animals, blood changes can be produced by the Roentgen ray. It is rational to assume that individuals exposed to small doses for a long time should also show blood changes. In Vienna some years ago, a roentgenologist died of lymphatic leukemia, and later another died in Munich of the same disease. One writer reports ten cases of leukemia in Roentgen workers. Siebenrock observed a similar case in a man working with radium.

The published accounts of the animal experiments do not all agree. All report changes in the number of leukocytes. Usually, this is a reduction in the number in varying degree, according to the time and frequency of the exposure. Heineke exposed mice, guinea-pigs and rats to the Roentgen ray, and observed within a few hours a high-grade disturbance of the lymphocytes and lymphatic tissues, including the lymph glands, spleen and the lymphatic structures of the intestine. Later on, bone marrow changes were manifested.

Other observers record changes of a different type in the white blood cells, which are more in accord with the findings in the blood of the Roentgen workers examined by me. This report covers a number of cases observed for the past year, but only in two cases was a blood examination procured before the work was begun. The later paper will include more cases examined under such conditions. The leukocyte counts were all made an hour before meals. I am indebted to

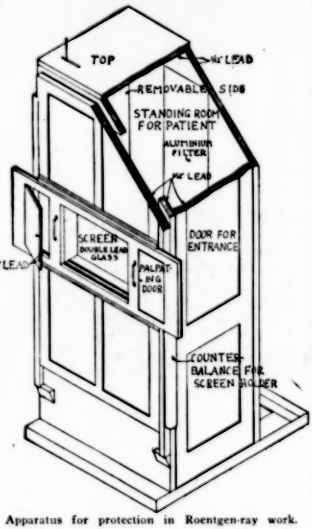
* Read before the Chicago Roentgen Society, June 4, 1915. The complete paper will be published in the Archives of Internal Medicine.

Drs. Capps, Beifeld, Moody and Coleman for most of the blood examinations. In the later paper, Dr. Beifeld will present the details of many blood smears studied, and submit drawings of peculiarities of various cells.

There has not been a uniform blood picture. The majority, however, show a diminution of the total number of leukocytes, which in some cases has been progressive. The lymphocytes were commonly relatively increased, and, at times, this was the most pronounced finding. A closer examination of the lymphocytes showed abnormal varieties described by some as unripe forms and by others as irritation forms. Myelocytes were found in three of the cases in small number. The red corpuscles and platelets were not affected, and the hemoglobin only slightly reduced.

Professor Milliken, of the University of Chicago, was kind enough to make some observations in my Roentgen-ray room before any changes were attempted. Both the primary and secondary rays were estimated by means of the gold-leaf electroscope. The time taken for the gold-leaf to fall through a given distance was used as a standard. It was suprising to observe the amount of secondary ray in various parts of the room.

After much study, the apparatus shown in the diagram was devised by Mr. L. R. Curtis, superintendent of St. Luke's Hospital. On all sides, the box is enclosed with one-twelfth inch lead, and the screen is covered by two pieces of three-sixteenth inch lead glass. Professor Milliken repeated the observations on the modified apparatus, and no appreciable primary or secondary rays were found in any part of the room. The horizontal fluoroscope is now being modified in a similar manner.



Apparatus for protection in Roentgen-ray work.

In conclusion, it may be said that although real danger of systemic changes in Roentgen workers exists with unprotected apparatus, yet with proper protection, there is comparative safety. The studies thus far have shown a varying degree of susceptibility to the effects of the Roentgen ray. It is not intended to discourage fluoroscopic examinations, but rather to urge all workers to use proper precautions.

122 South Michigan Avenue.

Child Labor in the Carolinas.—When I consider what remains to be done for the protection of the children in North and South Carolina I am forced to conclude that up to the present we have not progressed very far. North and South Carolina have a larger percentage of child workers in the manufacturing industry than any other states in the country. If the persons engaged in these industries should march by, every ninth person would be a child under 16. These children leave school forever at 12—often younger in North Carolina where there is practically no enforcement—to work eleven hours a day in our factories.—From an address by Wiley H. Smith, *National Child Labor Conference.*

A CASE OF INTUSSUSCEPTION DUE TO A FIBROMA OF THE ILEUM*

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AND
JONATHAN FORMAN, M.D.
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Benign neoplasms of the intestinal canal are not common enough to be placed in the category of ordinary occurrences, if the so-called adenomatous polypi are excluded. According to Mallory,[1] these polypi are "probably best regarded as congenital anomalies." The report of this case is of interest and seems justified, in view of the fact that only a very small number of similar cases have been recorded in literature. The clinical aspects of the case are submitted by Dr. Means and the pathologic findings by Dr. Forman.

History.—Mrs. F., white, aged 37, entered my service in the Protestant Hospital, Feb. 18, 1915, complaining of colicky pains in the abdomen and vomiting. The present illness began February 9, when she was awakened in the middle of the night from a sound sleep by severe abdominal cramps. She was nauseated and soon vomited. She got out of bed, drank some water and immediately vomited this. At this time the vomitus consisted of a dark green-looking fluid. She was disturbed most of the night but finally dropped off to sleep again. The next day she was somewhat relieved, but had frequent short attacks of colic in the lower abdomen, which were always accompanied by vomiting. The bowels, which had been rather loose two or three days prior to the onset of pain, became constipated, and had moved only two or three times as the result of enemas since February 9. The patient had not passed any flatus, although her abdomen had been somewhat distended. Attacks of colic and vomiting had alternated with intervals of comparative ease. Fearing that the attacks were brought on by eating, she had taken but little food. On the night before admission, the patient was awakened from sleep by an attack similar to the first one, but this time the vomitus was foul-smelling material and great in quantity. Since this, vomiting had been continuous and the vomited matter foul. The patient said that she had become very much weaker in the last few hours.

The patient was the mother of two healthy children. Her menstrual cycle was normal. Family history was negative. The patient had always enjoyed good health. The bowels up until two or three days preceding the primary attack had been regular, never requiring the use of a cathartic. The patient says she had never passed any blood to her knowledge. Examination of the blood at time of admission revealed 23,000 leukocytes, 89 per cent. of which were polymorphonuclear and hemoglobin 90. Urine was negative.

Examination.—Patient is well nourished; rather fleshy. Skin and mucous membrane appear somewhat pale. Examination of the heart and lungs, negative. Examination of the abdomen shows it to be quite distended, especially in the upper portion. Percussion note is tympanitic all over, more

* From the College of Medicine, Ohio State University.
1. Mallory: Principles of Pathologic Histology, 1914, p. 487.

pronounced above umbilicus. There is no distinct rigidity of the musculature although the right side is more resistant than the left. Patient complains of but very little pain on palpation. In the right iliac fossa, there is an area of tenderness on deep pressure. There are no masses palpable.

The diagnosis rested between intestinal obstruction and appendicitis, but a careful review of the history and physical findings seemed to point toward the former. Immediate operation was advised and accepted

Operation.—Under ether anesthesia, a right rectus incision was made; when the peritoneum was opened, the intestines were seen somewhat distended, although not discolored. Further examination revealed a mass in the right iliac region which was found to be the cecum with the ileum intussuscepted through it and up into the colon. The intestinal coats appeared normal, there being no infiltration or exudate, showing that the intussusception was probably of very recent occurrence. The tip of the intussusceptum was easily found just below the hepatic flexure, but when reduction was attempted in the usual manner, it did not slip out so readily as a recent intussusception should. Search for the reason of this revealed a small round mass about the size of an egg further up in the colon, which seemed to be attached by a pedicle to the tip of the intussusceptum. This, when pushed downward, caused an easy reduction. With reduction complete, the tumor rested in the ileum about 10 inches from the ileocecal valve, causing bulging of the intestinal walls. Resection of the bowel was unnecessary. A longitudinal incision was made through the intestinal wall directly over the tumor, which was found to be fastened by a pedicle, half an inch in diameter and 1 inch in length and apparently arising in the submucosa. The base

Fig. 1.—Gross specimen.

was readily dissected out, the tumor removed, and the submucosa closed by a purse string. The ileum was then sutured and the abdomen closed in the usual manner. The woman made an uneventful recovery and was discharged from the hospital in two weeks.

Pathologic Findings.—The specimen was a mass measuring 3.5 by 4 by 3 cm., exhibiting a reddish surface covered with small villous projections giving it a resemblance to the dorsal surface of the tongue (Fig. 1). This covering was continuous over the mass except at one end. There was an area here 2 by 1.5 cm., which presented a raw surface, evidently the point of attachment.

On section, the mass appeared edematous, giving off an abundance of clear watery fluid. The covering appeared to be an intact mucous membrane. The tissue was placed in the appropriate fixatives, cut and stained with hematoxylin and eosin, with phosphotungstic acid hematoxylin, and with thionin after the method of Hoyer for the demonstration of mucin.

Microscopic examination showed the tumor to be composed of cells which are widely separated by the fluid in the tissue (Fig. 2). There was a rather marked infiltration with cells of the lymphocytic series, especially with the lymphocytic type of plasma cell and with only an occasional polymorphonuclear neutrophilic leukocyte. The mucous membrane was intact and normal in its position and appearance, except for its edematous condition (Fig. 3). The tumor cell presented an elongated, flat nucleus. The cell had elaborated both fibroglia fibrils and collagen fibrils. The collagen fibrils were separated into strands by the fluid of the tissue. The Hoyer stain for mucin was negative.

Diagnosis.—A pedunculated fibroma, which had become edematous, growing in the submucous coat of the ileum and projecting into the lumen of the intestine.

There are certain features in this case, aside from the rarity of the type of growth, which make it of considerable interest. In the first place, the woman did not reveal any history of such a tumor prior to the onset of the present trouble. Close questioning after operation failed to call to her mind anything which might indicate intestinal disturbance. The size of the tumor, which was sufficient to distend the lumen of the bowel, would suggest long duration,

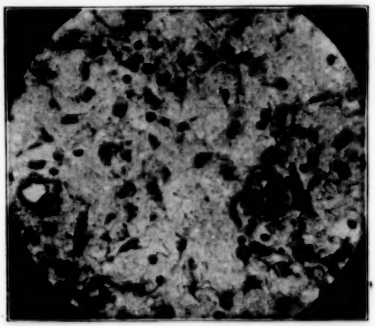

Fig. 2.—Photomicrograph showing the cell type of the tumor.

Fig. 3.—Photomicrograph showing the relation of the mucosa to the tumor.

and it would seem that some manifestations should have been present.

Another interesting point is the progression of the symptoms from those of an intermittent obstruction with its accompanying attacks of colic, to an intussusception and complete obstruction. Based upon a comparative study of teaching specimens of intussusception produced on dogs, the intussusception in this case could not have been present more than five or six hours, for had a longer time elapsed, the bowel coats

would certainly have shown evidence of infiltration and congestion.

The mechanism in the production of this intussusception deserves some consideration. It is quite possible that, in consequence of the intermittent obstruction with its increased peristalsis and the attempts of the intestine to push the tumor mass forward, traction on the attachment of the pedicle caused a contraction ring which allowed the part of the bowel immediately above to commence the process of invagination.

The type of intussusception here is ileocolic, which, according to statistics, comprises only about 8 per cent. of all cases. It is the only type of intussusception in which the progression takes place at the expense of the intussusceptum. The reason for the high leukocytosis is hard to explain from the clinical and pathologic findings, as nowhere were there any evidences of inflammatory change.

A search through the current literature verifies the statement of textbooks as to the rarity of this growth. Dewis,[2] in 1906, collected thirty-six myomas, myofibromas and fibromas occurring in the intestine. Eleven of these were situated in the ileum. Only five were fibromas. Elliott and Corscaden,[3] in 1911, reported 300 cases of intussusception. Myxomas and fibromas had been the etiologic factor in eleven cases of this series. Since there is some question as to whether myxoblastomas should be placed in a class distinct from fibroblastomas, they are included as a group. In 1912, Haggard[4] referred to a case occurring in the practice of F. S. Watson of a fibroma measuring 2 by 3¼ inches. In 1913, H. O. Pantzer[5] reported a fibroma measuring 1½ by 2½ inches occurring in a girl aged 15. These are the only cases of intestinal fibroma which we have been able to find reported.

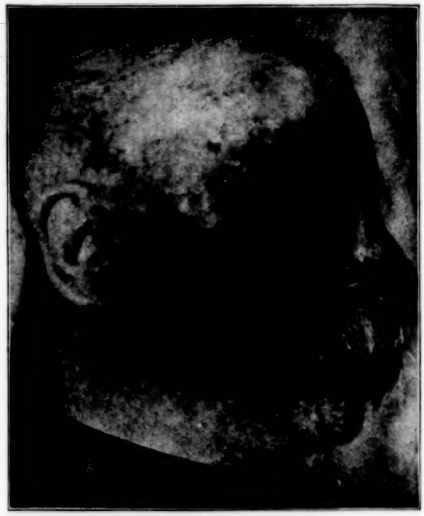

Fig. 1 (Case 1). — Dark area is the everted conjunctiva. Largest active lesion on cheek. Others on nose and about the ear. Scar tissue covers whole of right forehead.

2. Dewis: Boston Med. and Surg. Jour., Oct. 18, 1906.
3. Elliott and Corscaden: Ann. Surg., liii.
4. Haggard, W. D.: Tumors of the Small Intestine, THE JOURNAL A. M. A., July 27, 1912, p. 253.
5. Pantzer: Am. Jour. Obst., 1913, lxix, No. 5.

Elevator Accidents.—The number of persons injured and killed in the United States by preventable elevator accidents is appalling, and is increasing constantly, owing to the never-ceasing erection of buildings within which countless elevators are installed, adding greatly to those already in use throughout the United States. It was estimated in 1912 that there were in that year between 7,000 and 8,000 fatal accidents on elevators, and about 10,000 persons injured. From 1908 to 1912 in New York City alone, upward of 400 persons were killed on passenger and freight elevators, and a greater number were injured.—*Safety Engineering.*

BLASTOMYCOSIS OF THE EYELIDS WITH REPORT OF CASES*

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DENVER

This paper has been written to place on record two cases of a disease hitherto supposed to be rare, and still inadequately noticed in the periodical literature and text-books on ophthalmology, and to call attention to its clinical importance, the disastrous results, through distortion of the lids, of failure to recognize it, and its excellent prognosis under proper treatment.

REPORT OF CASES

CASE 1.—J. A. R., aged 68, native of Ohio, resident many years in Colorado. Other history unimportant. The present disease began in 1911 as a small nodule on the right cheek. Since that time he had been under the care of four competent ophthalmologists. The disease had been slowly, but rather steadily, progressive, and the diagnoses given had been lupus and skin cancer.

March 15, 1912. A superficial cicatrix occupies the entire right side of the forehead and scalp to the median line, and back to the occiput. On the right side both lids are completely everted by traction of the cicatricial skin. The upper lashes occupy about the normal position for the eyebrows; the lower lid is drawn down and out, so that the lower punctum is 10 mm. from its normal position; the conjunctival sac is completely everted. The lid margins are flattened out so that the conjunctiva and skin of the face present one continuous plane of tissue. The cornea is gray, opaque, and the sclera hidden by thickened conjunctiva. The cicatricial skin is not adherent to the deep tissues. On the left side a patch of scar tissue has drawn the upper lid away from the eyeball, so that the nasal third of its margin is drawn up over the upper inner angle of the orbit. The left cornea is still readily covered by the outer portion of the upper lid, and the eyeball is normal. Vision: Right, light perception; left, 4/8 mostly.

Active lesions, such as will be described in connection with Case 2, were present on the lower part of the right cheek, right side of the neck below the ear, right side of the nose, and at the upper, outer margin of the orbit. These lesions were sharply bounded, with a margin elevated about one-eighth of an inch above the neighboring skin surface. The examination of pus from the active lesions showed the presence of numerous budding organisms, such as characterize blastomycosis.

On account of the extensive skin lesions away from the eye, the patient was referred at once to Dr. A. J. Markley, to whom I am indebted for the accompanying picture, Figure

* Read before the Section on Ophthalmology at the Sixty-Sixth Annual Session of the American Medical Association, San Francisco, June, 1915.

1, and some notes on the case. The most extensive active lesions were curetted under cocain infiltration and dressed with boric acid ointment. Potassium iodid was given in doses rapidly increased to the limit of toleration. By the middle of May all active disease had disappeared. But some of the scars showed small areas of trophic ulceration.

Massage of the scars, particularly of those dragging on the left upper lid, was continued, and plastic operations were suggested. Irritation of the exposed conjunctiva required the use of boric acid solutions and occasional applications of silver nitrate and glycerole of tannin. Operation was deferred while the patient spent the summer in his old home in the East. On his return he was suffering from chronic cystitis, with renal involvement, and he died in September. There was no indication of systemic blastomycosis.

Case 2.—Mrs. E. R. S., aged 39, was referred to me by Dr. H. B. Sprague of Salt Lake City. Her previous history was negative. She had noticed a swelling which she thought a stye on the left upper lid the middle of April, 1914, which gradually extended under treatment, at first by her family physician, and then by two specialists, successively. The lesions grew progressively worse, and about May 1 a spot appeared on the lower lid near the nose. Later a third lesion appeared toward the outer end of the upper lid.

The treatment included various operations: Removal of the growth by cutting; pus squeezed out with forceps; ten openings in the upper lid; and opening and scraping the lid under ether. The second specialist operated on the lower lid under cocain. The lesions continued to extend, and great pain was complained of, for which an anodyne was taken at night.

Nov. 23, 1914 (more than seven months after the initial lesion). Both lids are swollen to double their normal thickness and wrinkled. There are three ulcers as shown in Figure 2, the first in the nasal margin of the upper lid, 15 mm. long by 6 mm. broad. About the outer canthus one 7 mm. by 5 mm. On the lower lid one 10 mm. by 8 mm. These all presented the same general characteristics. The surface presented large, rather flabby granulations, between which a moderate purulent discharge could be pressed out. Near the edge the granulations were covered at some points by brown scabs. The edge of the lesion was elevated and thickened, suggesting the edge of a rapidly extending epithelioma, but more acutely inflamed, quite soft to touch, and containing at many points minute abscesses, 1 or 2 mm. in diameter, or smaller, from which pus was readily pressed out. Smears from the pus showed a few diplococci and the rounded and budding figures of the so-called blastomycetes. Her vision and eyeballs were normal. The conjunctiva was only slightly hyperemic.

Fig. 2 (Case 2).—Lesions progressive for seven months. Cicatricial contraction still comparatively slight.

Nov. 24, 1914. A 4 per cent. solution of silver nitrate was applied to the whole surface of each of the ulcers, and potassium iodid was given, 10 grains three times a day; the dose to be increased each day.

November 28. The secretion of pus was greatly diminished and the granulations looked healthy.

December 18. The lesions had healed completely, three weeks after she commenced to take the iodid. The thickening of the lids is almost gone. Near the middle of the upper lid there is a slight notch where tissue was excised at one of the operations; and some displaced lashes that may be drawn against the cornea and require subsequent treatment. Otherwise she is quite well.

The maximum dose of iodid was 37 grains three times a day. This was now discontinued. She has remained quite well since. There was no reason to suspect either syphilis or tuberculosis in this case, and the diagnosis of rheumatism, made by one of her attendants, seemed to have no substantial basis.

HISTORY

At the meeting of the American Dermatological Society in 1894, Gilchrist presented sections of a skin lesion which contained the double-contoured, highly refractive bodies subsequently identified as blastomycetes. Six weeks later Buschke described a skin disease in which he had found coccidial bodies, which Busse later described in *Virchows Archiv* under the title "Saccharomyces Hominis." This case, besides the skin lesions, showed systemic infection, and at the necropsy, lesions of lungs, kidneys and spleen.

Later Gilchrist and Stokes[1] reported a case in which the lesions involved the skin of the lids, causing destruction of the lids of both eyes. The importance of the disease to ophthalmologists was brought out by the papers of Wood[2] and Wilder,[3] who each reported a case occurring in his own practice. Wood brought together nine cases, including that of Wilder, in which the eyelids had been involved in this disease. Since that time the condition has been described and illustrated in the textbooks of Ball and Fox, and briefly described in those of Weeks, de Schweinitz, Wood and Woodruff, and Jackson, but it still remains unnoticed in the majority of textbooks on diseases of the eye published within the last three years. The best account is found in the American Encyclopedia of Ophthalmology. The only allusion to it in any European work is a bare mention in Axenfeld.

ETIOLOGY

The constant finding in the abscesses of this disease of an organism somewhat related to yeasts and the moulds, and its pathogenic character, as proved by experiments, render it certain that this organism is the essential factor in causation. Just what place this organism should be assigned in any botanical scheme is still uncertain. The name "blastomycosis" or "blastomycetic dermatitis" has been proposed and used in a tentative way. That it was one of the saccharomycetes was the suggestion of Busse.[4] Ricketts[5] concluded that it was an oïdium. Ophuls[6] suggested for the allied organism he had to deal with the name coccidioides. De Beurmann and Gougerot[7] proposed to class such organisms in the genus called *Zymonema*. Whitman,[8] who has made the most advanced study of the subject, concludes that the organism may belong either to the *Manascaceae*, or the *Exoascaceae* of

1. Gilchrist and Stokes: Bull. Johns Hopkins Hosp., 1896, vii, 129; Jour. Exper. Med., 1898, iii, 53.
2. Wood: Ann. Ophth., 1904, p. 92.
3. Wilder, W. H.: Blastomycosis of the Eyelid, The Journal A. M. A., Dec. 31, 1904, p. 2026.
4. Busse: Virchow's Arch. f. ath. Anat., 1895, cxl; cxliv.
5. Ricketts: Jour. Med. Research, 1895, i, 373.
6. Ophuls, W.: Coccidioidal Granuloma, The Journal A. M. A., Oct. 28, 1905, p. 1291.
7. De Beurmann and Gougerot: La Tribune méd., 1909, xlii, 501.
8. Whitman: Jour. Infect. Dis., 1913, xiii, 85.

Engler and Prantl. But he points out that only a study of the plant in its natural habitat can settle the question of its botanical relations.

Slight differences have been observed in the growth and reproduction of the organisms obtained from different cases; and it is not unlikely that two or more different species exist, all pathogenic, but differing as to the clinical picture they produce. This view is supported by the rather sharp line of demarcation between cases in which only the skin seems to be affected, and those of so-called systemic blastomycosis. The former continue superficial without any systemic manifestations for many years, and are curable without relapse. The latter very generally begin with pulmonary symptoms, or relatively deep-seated abscesses, are almost always fatal, and sometimes run their course in a few months.

Sometimes the history of an injury is given through which the invading organism is supposed to have found entrance. In both my cases such history was lacking, and in the second any previous local injury was positively denied. My two cases represent both sexes, but the great majority of recorded cases have occurred in men, though a few have been in women. The youngest patient on record (Kessler[9]) was a girl who became affected when between 4 and 5 months old, and was completely cured before she was 11 months old. My first case, infected when 64 years old, is the latest in life that I have noted. A large proportion of the patients have followed occupations that exposed them to contact with low vegetable forms of life, but no particular occupation seems to be responsible for any considerable proportion of cases.

DISTRIBUTION AND FREQUENCY

This disease has sometimes been called the "Chicago disease," because of the earlier cases, a very large proportion were reported from that city. But among these cases were many persons who, in all probability, became infected in Wisconsin, Iowa, Indiana, and even in the Southern states. The first case came from Baltimore. Others have been reported from Philadelphia, New York, Boston and New Orleans. My own cases represent Denver and Salt Lake City. A series of cases of systemic blastomycosis has been reported from California, and it has been claimed (Rixford[10]) that these differed from other forms of blastomycosis, and they have sometimes been spoken of as the "California disease."

It seems more probable that the apparent frequency of the disease in certain centers is due to greater frequency of its recognition than to any restriction in the geographical distribution. My two patients have been seen within three years. Judged by my own experience, six oculists have failed to recognize these cases to one who happened to have them sufficiently in mind. Gilchrist's first case was long treated by Duhring as one of typical scrofuloderma. Kessler, making his first report of a case, states that he has previously seen two similar cases. If, as seems certain, these cases are widely distributed, and have usually passed unrecognized, the condition is certainly much more frequent than the published cases would indicate.

The local disease seems to have a special predilection for the lids. Pusey[11] states that of nine cases of blastomycosis which have come under his care, six showed lesions on the lower lid. This proportion is much higher than holds for the mass of reported cases. Wood concluded that one-fourth of the cases affected the lids, and probably this is not too high a proportion for the cases that are not systemic.

DIAGNOSIS

This may ultimately rest on the microscopic findings of the organism. But the clinical history and appearances of the case are sufficient to indicate its character with great certainty. The active lesion at once suggests epithelioma. But the infiltrated margin is soft and contains minute abscesses throughout its whole extent. Similar abscesses are to be found in the floor of the ulcer. The whole appearance of the lesion as seen on the patient, or represented in photographs or plates, is different from that of any other lesion that we encounter about the lids.

In making the diagnosis, epithelioma, tuberculosis and syphilis are to be excluded. No doubt some of the cases reported as striking cures of skin lesions of the lids by potassium iodid, in which the diagnosis of syphilis was based on the therapeutic test, have really been cases of blastomycosis. It is also probable that many of the older cases of tuberculosis or lupus affecting the lids were of this character. If the disease is borne in mind, it is not likely to be overlooked. When it receives proper attention in our text-books it will be recognized as quickly and certainly as any of the important inflammations involving the lids.

TREATMENT

Briefly, this is the administration of potassium iodid in doses rapidly increased toward the limit of tolerance. This method was first suggested by Bevan.[12] In both of my cases it constituted practically the whole of the treatment. The curetting of the lesions or application of nitrate of silver, or similar solutions, may bring about a condition more favorable to healing. But the iodid is the essential agent, as the history of Case 2 illustrates. The testimonay on this point with reference to cases of skin blastomycosis is almost unanimous. The experience in systemic blastomycosis has tended to throw doubt on it, since many of these cases have gone on to a fatal termination, in spite of very large doses of potassium iodid. But a close examination of case histories seems to show that in the systemic disease, although it may differ essentially from the disease here under discussion, the few cures and instances of marked temporary improvement have occurred after administration of potassium iodid.

The beneficial effects of other methods of treatment, as the administration of copper salts, and the application of the Roentgen ray, have been reported of cases in which the iodid was also used. The value of the drug rests wholly on an empirical basis, but may well be compared with that of mercury in syphilis, or quinin in malaria. Attempts at vaccine treatment have been made,[13] but the best results were observed while the iodid was being taken. However, the injection of vaccines was followed by a distinct general and local reaction, and the experiments in this direction may yield valuable results.

Except through involvement of the lids, blastomycosis seems to have little tendency to affect the eyes.

9. Kessler, J. B.: Blastomycosis in an Infant, THE JOURNAL A. M. A., Aug. 17, 1907, p. 550.
10. Rixford: Tr. Am. Surg. Assn., 1914, xxxii, 99.
11. Pusey, W. A.: Tr. Sec. on Ophth., A. M. A., 1904, p. 389.
12. Bevan: Brit. Jour Dermatol, July, 1899
13. Stober, A. M.: Systemic Blastomycosis, Arch. Int. Med., April, 1914, p. 509.

Generally the conjunctiva is involved only through the exposure produced by eversion of the lids. Churchill and Stober[14] report a case of systemic blastomycosis in which the conjunctiva of the right eye was red and edematous five weeks before death. Attempts to elicit an ophthalmic reaction similar to that obtained with tuberculin have failed.†

REFERRED PAIN IN FLATFOOT

MAX STRUNSKY, M.D.
NEW YORK

Referred pain in flatfoot and weak feet is being constantly overlooked, especially when the referred pain is in a remote part of the body or when the arches to all appearances and tests seem normal and may even be higher than normal. The pain, however, must indisputably be a symptom of arch strain, since the proper support of the arches brings relief from the pain which heretofore resisted firmly all known therapeutic means.

Lately I met a striking example of such a case.

CASE 1.—Man, aged 26, baker, for two weeks was compelled to give up his work entirely because of a distressing lumbago which had been plaguing him for some time. An examination showed that the spine was not in the least tender, nor was there any spasm of muscles. Seated in a chair, he could easily bend far forward so that inflammation of the vertebrae was ruled out. Sacro-iliac disease was eliminated, because with his knees stiff he could bend forward till his finger tips touched the ground. He had no sciatica, because there was not the least tenderness over the course of the sciatic nerve, no matter how hard we pressed. The cycle of extreme hip movements was unimpaired. There was no inflammation or static disturbance of the feet. An imprint of the arches found them to be normal, and they were even slightly higher than the normal. All other examinations of the body were negative, the complaint being exclusively limited to a distressing, gnawing pain in the small of the back which radiated down to the outer side of the legs. The patient had been treated for some time with aspirin, massage, the high-frequency current, strapping of the back, etc., without benefit. I padded the arches with felt, and the pain eased immediately. A pair of celluloid plates was made for him and he returned to work. Now he writes that he feels perfectly well.

Another case of this character which I treated two years ago impressed me:

CASE 2.—Salesman, aged 22, complained of pain in the small of the back, also of pain between the shoulder blades and pain along the outer side of the arms. Examination was negative. The arches seemed normal. The patient was treated with massage, hydrotherapy, baking, drugs, etc., for a long time without becoming better or worse. All kinds of diagnoses were made in this case, from neurasthenia down to eyestrain. Glasses which were fitted for him failed to relieve him. One day a shoe clerk gave him a pair of arches, and the pain ceased immediately. He still wears his plates and has remained well ever since.

That pain in the inner side of the knee is often due to arch strain is a fact that even our junior assistant in the hospital is well trained to consider. I am not speaking of the numerous fanciful symptoms which some have attributed to arch strain, as paresthesia of the outer side of the thigh, nausea, vertigo, etc., but rather of the more common tangible pain due directly to arch strain.

What is the cause of this referred pain? If there is an inflammation in the feet, it is easy to understand that pain may manifest itself in any part of the nerve trunk where a nerve ending is pressed by the inflammatory process. But how explain the pain when there is not the slightest tenderness or irritation in the feet, especially the referred pain in a remote part of the body not even supplied by the lumbar and sacral plexus? The referred pain from arch strain is due rather to disturbance in muscle balance. The arch is practically the pivot on which the anterior flexor muscles and the posterior extensor muscles of the body are riveted. Any disturbance of the arch causes more strain to fall on one group of muscles, and a compensatory lessened strain on other groups of muscles. Referred pain in flatfoot, especially in the remote part of the body, is due therefore to traumatism of the muscles caused by the disturbance in muscle balance.

It is strange that though the importance of flatfoot and weak feet as a cause of painful feet is at present so much overestimated, there should be many cases in which the pain due to arch strain is treated for all kinds of conditions. One fact which may guide us to a right diagnosis of referred pain due to arch strain is that, though there is no tenderness in the feet and the arches may appear normal or even higher than normal, still the patients have occupations which compel them to stand for many hours at a time. Also, no other treatment besides the relief of the arch strain has any effect on the pain to make it better or worse. As a test, padding the feet with felt may suddenly stop all pain.

236 West Seventieth Street.

14. Churchill, T., and Stober, A. M.: A Case of Systemic Blastomycosis, Arch. Int. Med., April, 1914, p. 568.

† The discussion on this article will appear in an early issue.

SUPPURATION OF THE FOREARM TREATED BY IMMERSION IN A SALT SOLUTION BATH

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In view of the extensive use of hypertonic salt solutions in the treatment of wounds, in the European war hospitals, and the excellent results obtained, I wish to record a case in which the use of such solution was followed by complete cessation of suppuration of the bones of the forearm.

On entering the surgical service as intern to Dr. Morton at the Cook County Hospital, September, 1909, I found among my pus dressings a case of very extensive suppuration of the bones of the forearm. The patient was a young man, German, aged 19, who had received half a dozen fractures by falling from the roof of a dwelling. The fractures had all healed kindly except the bones of the forearm. Here a very extensive osteomyelitis was present, the predominating organism being the *Bacillus pyocyaneus*. The discharge was so profuse and foul that I conceived the idea of putting the entire arm in a potassium permanganate bath to deodorize it.

I had a specially constructed trough made of galvanized tin with an outlet tube which could be regulated. A continuous flow of a very weak warm permanganate solution was kept up for twenty-four hours. The forearm and lower arm were entirely immersed in the solution.

After twenty-four hours, fearing permanganate poisoning, I discontinued the bath, but the young patient begged to have it restored, as he thought that it had done him considerable good. The bath was restored, but instead of the permanganate solution I used a strong salt solution. This was kept up forty-eight hours and discontinued because the arm was very much swollen and tense.

I was astounded next day, on dressing the arm, to note scarcely any pus on the dressing, and at the end of the week the wound was clean and granulating.

I do not hesitate to make the statement that the forearm would have been sacrificed soon except for the wonderful effect of the continuous bath. In fact, Dr. Morton had had a roentgenogram taken and studied with a view to amputation.

234 Michigan Street.

Special Article

PRACTICAL PHARMACOLOGY *

(Continued from page 2137)

XXVI

ANTIMONY

The systemic effects of antimony resemble those of arsenic so closely that they do not require detailed discussion here, but it is important to remember that the early vomiting and diarrhea following the use of toxic doses of antimony may be due to local action, though early vomiting usually serves to prevent the occurrence of severe toxic symptoms.

The occurrence of diarrhea, on the other hand, indicates that the poison has either entered the duodenum or has been absorbed, and both may occur. Should the administration of the usual emetic dose of antimony fail to produce vomiting, as sometimes happens, poisoning may result unless the drug is removed from the gastro-intestinal tract. When there is reason to fear its toxic action efforts should be directed toward its removal, as in the case of arsenic.

Limewater, a pint or less, the oxid or carbonate of magnesia, or tannin should be administered,[1] and the stomach washed promptly and thoroughly. If precipitants are not at hand no time should be lost in efforts to get them before washing the stomach. After the stomach has been washed the patient should receive 30 gm. (1 ounce) of magnesium sulphate in about 500 c.c. (1 pint) of water in order to remove any of the antimony that has passed into the intestine.

If antimony remains in the gastro-intestinal tract for a sufficient length of time corrosion occurs, with absorption, and the gastro-intestinal symptoms are augmented by the systemic actions of the poison in the way described under arsenic, and in that case washing of the stomach and saline purgatives would be of little use, though they would at least do little harm.

Antimony is usually absorbed very slowly indeed, hence its longer sojourn in the gastro-intestinal tract favors the local irritant action, and interferes correspondingly with its use for the systemic effects.

This slow absorption with the resulting prolonged local gastro-intestinal action is the basis for its use as a nauseant, otherwise it would be inadmissible to employ so toxic an agent for that purpose while we have so many harmless agents that are capable of inducing nausea.

As little as 0.15 gm. (2½ grains) has caused death when vomiting was delayed or absent, but such an occurrence is rare, and much larger doses have been survived.

Severe poisoning seldom follows the therapeutic use of antimony at present, because it is little used except as a nauseant, the dose for this purpose being too small to cause toxic symptoms even though absorption takes place, and emesis nearly always occurs if large doses are employed.

But for the difficulty of securing the systemic action without the gastro-intestinal disturbances, antimony might be used for almost any of the purposes for which arsenic is employed. It is still used in psoriasis when the condition fails to yield to other forms of treatment, and it is used occasionally for trypanosomiasis.

The systemic effects are best attained by intravenous injection, the subcutaneous injection being too painful.

DOSAGE

Certain of the uses and doses of antimony have been discussed under the emetics. Camac states that he used from 0.01 to 0.015 gm. (⅙ to ¼ grain) of the sodiotartrate about once a week, in the treatment of a case of sleeping sickness which had apparently become resistant to atoxyl.

The ointment was formerly used externally but it sometimes produced extensive abscesses and is now rarely employed.

For materia medica see Emetics.

PHOSPHORUS

The action of phosphorus resembles that of arsenic and antimony to a certain extent. Thus the administration of very small amounts to young animals causes an increase in the growth of bones, apparently through stimulation of the osteoblasts. At the same time it causes the deposit of dense bone in cancellous tissue, but the prolonged administration causes the absorption of the latter. Small doses of phosphorus have much less effect on the bones of adult animals, but these also show some deposit of dense bone.

Phosphorus, like arsenic, causes some increase in the red blood cells, though it does not appear to increase the total amount of hemoglobin in the blood. Small doses do not appear to induce other notable pharmacologic actions unless long continued.

There are usually no symptoms observed immediately after a poisonous dose of phosphorus has been taken by the mouth, but after some hours there is gastro-intestinal pain with vomiting and sometimes diarrhea. The vomited matter has a garlic-like odor, and this with the phosphorescence which it exhibits in the dark, are characteristic and suffice for a diagnosis in otherwise doubtful cases.

Following the early symptoms there is usually a period of several days during which the patient suffers no disturbance, after which he may be seized again with vomiting and diarrhea; the liver is enlarged and tender; the patient is jaundiced and suffers prostration with its attendant circulatory disturbances, partly due to the direct action of the poison on the heart. Hemorrhages occur in various tissues, and the vomitus, feces and urine may contain blood.

There is a fatty infiltration of the liver, heart and other organs, secondary to the disturbances of metabolism, whereby there is an increased destruction of protein. Death from heart failure occurs in about one week in fatal cases, but severe symptoms may be followed by recovery, in which case the organs that have been infiltrated with fat become cirrhotic from the proliferation of interstitial connective tissue; but it is said that this occurs more markedly in poisoning by repeated doses than after a single large dose. This cirrhosis affects the liver and gastro-intestinal tract to a greater extent than the kidneys, and these effects of course induce the usual secondary results.

Acute phosphorus poisoning sometimes occurs from swallowing rat paste. It is very slowly absorbed from the gastro-intestinal tract, and when the patient is seen shortly after the poison has been swallowed the efforts

* This is the twenty-sixth of a series of articles on useful drugs—on practical pharmacology for the general practitioner. As soon as completed, these articles, elaborated by additional subjects, will be published in book form.

1. Cushny advises the use of strong tea as a precipitant for antimonial salts.

should be directed toward removing as much of it as possible and oxidizing the remainder. The stomach should be washed with a very dilute solution of copper sulphate, 2 gm. (30 grains) in about 500 c.c. (1 pint) of water, or 2 gm. (30 grains) of copper sulphate dissolved in 50 c.c. (2 fluidounces) of water may be administered as an emetic, and about 0.1 gm. (1½ grains) may then be administered in a glass of water with a view to causing the phosphorus remaining in the stomach to become coated with metallic copper; this being rapidly converted into an insoluble phosphid. As an alternative to the use of copper sulphate in the wash water, and later, one may wash the stomach with a large amount of solution of potassium permanganate, 0.1 to 0.2 per cent., and later administer a glassful of water containing 0.3 gm. (5 grains) of potassium permanganate. As this salt attacks organic matter and other readily oxidizable substances, it is much more effective in oxidizing poisons if it be given after the stomach has been washed than if it be given while the stomach is filled with food.

Hydrogen peroxid and oil of turpentine are sometimes recommended as oxidizing agents in phosphorus poisoning, but the peroxid is decomposed so rapidly in contact with mucous membranes and body fluids that it can act on the phosphorus only if it be brought into immediate contact with it in the stomach, and oil of turpentine is also of doubtful value.

Unless the stomach is emptied almost immediately after the phosphorus has been swallowed, some of it will have passed into the duodenum, where it will be out of reach of the antidotal measures just discussed; it is absorbed very slowly indeed, and the intestine should be emptied as promptly as possible, preferably by using a large dose of magnesium sulphate, 30 gm. (1 ounce) dissolved in about 500 c.c. (1 pint) of water. A small dose of copper sulphate may be dissolved in the solution of magnesium sulphate if it be at hand, or it may be administered later.

Fats and oils should be avoided while the phosphorus remains in the gastro-intestinal tract, as they interfere with the efforts at oxidation and favor absorption of the poison.

When later symptoms of phosphorus poisoning have developed alkalies should be given, preferably citrates and bicarbonates, to neutralize the large amount of acid formed in the tissues.

Workmen employed in factories where white or yellow phosphorus is used are subject to a peculiar necrosis of the jaw bone which was formerly attributed to the action of phosphorus that had gained access through carious teeth; but it seems probable that the bone is first affected by phosphorus that reaches it through the circulation, rendering it susceptible to bacterial action. This truly terrible affliction is less common when red "amorphous" phosphorus is used, and is almost unknown when the sesquisulphid of phosphorus is employed, as it now is quite commonly in the manufacture of matches.

THERAPEUTIC USES

Phosphorus favors the deposition of calcium in growing bones, and it is probably useful in osteomalacia, in rickets and possibly in bone that is undergoing repair; but the action on the blood corpuscle formation does not justify its use in anemia, in which iron and arsenic are preferable.

It has been used in various affections of the central nervous system for its supposedly tonic or stimulant action, but it has little direct action on the central nervous system, and there is no evidence of its value in these conditions for which it is recommended principally by the manufacturers of nostrums intended to supply phosphorus in a form more readily available than that in the inorganic phosphates, and it is used less by educated physicians for such purposes than formerly.

DOSAGE

The average dose of phosphorus is 0.5 mg. (1/120 grain), to be given several times daily. A somewhat larger daily dose is recommended in osteomalacia, in which as much as 5 mg. (1/12 grain) may be given in the course of a day; but such doses cannot be considered altogether safe.

Phosphorus may be given in pills which may be made by using one of the many fairly permanent mixtures of phosphorus with suet, wax, or rosin, or by triturating phosphorus with a little sulphur under water, until liquefied; the water is poured off and a suitable excipient added. It may also be given dissolved in olive oil or cod-liver oil, or in alcoholic solution in the form of an elixir. It may be prescribed for children somewhat as follows:

Phosphorus	0.01 gm.	1/6 grain
Cod-liver oil....to make	100 gm.	3 fluidounces

Free the oil of contained air by heating to 150 C. and allow to cool, then add the phosphorus to 150 C. and warm to about 80 C. and shake until the phosphorus is entirely dissolved.

Two teaspoonfuls of this solution may be given daily, but it is said that even this amount taken daily for several days has caused death, and its use is not recommended.

For alcoholic solutions, the phosphorus is preferably dissolved in chloroform and mixed first with absolute alcohol, then with a mixture of alcohol or glycerin and elixir, care being taken to keep well within the solubility of phosphorus in the several solvents.

Practically all of the preparations of phosphorus deteriorate on keeping and, if it is desired to give this substance in an active form, care must be exercised to have the mixtures freshly prepared from materials that will comply with the official requirements. It will also be necessary to see that proper precautions are observed to free the solvent, particularly an oil, a fat or a resin, of air or free oxygen so as to avoid deterioration as much as possible.

MATERIA MEDICA

Phosphorus, U. S. P., occurs in commerce as a semitransparent, wax-like solid, usually in the form of cylindrical sticks. It has a distinct and disagreeable odor and taste, is luminous in the dark when exposed to air and should be kept under water in well-closed vessels, in a moderately cool place, protected from light. Phosphorus is nearly insoluble in water, slightly soluble (1:350) in absolute alcohol or (1:400) in glycerin, and soluble (1:80) in fatty oils and in ether; also (1:25) in chloroform and very soluble (1:0.5) in carbon disulphid.

The official or medicinally active form of phosphorus may be converted by means of heat into the red or allotropic modification of the element. This red or "amorphous" phosphorus is permanent in dry air, is insoluble in ordinary solvents, and is generally considered to be non-poisonous.

The difficulties involved in the therapeutic use of phosphorus in the elemental state have led to the introduction of various compounds intended to supply phosphorus to the organism, and while it is possible that some of these preparations may have therapeutic properties, their advantages are not very obvious; but, on the other hand, there is no question that rational therapeutics has been interfered with by the sensational way in which most of them have been advertised.

Among the first of these compounds were the hypophosphites, which were introduced into therapeutics about half a century ago by Churchill, who supposed that they influenced nutrition favorably and who therefore advised their use in tuberculosis.

A typical salt of this class is:

Calcii Hypophosphis. — Calcium Hypophosphite, U. S. P., which occurs as colorless, transparent crystals, small lustrous scales, or white crystalline powder, odorless and having a nauseating bitter taste. It is freely soluble (1:65) in water and is practically insoluble in alcohol.

Calcium hypophosphite is incompatible with iodids and oxidizing agents. Caution should be observed in dispensing the substance, as an explosion may occur when it is triturated or heated with substances rich in oxygen, particularly nitrates and chlorates, that may be affected by a powerful reducing agent. It is not recommended for therapeutic use.

It has long been stated that the hypophosphites undergo little or no change in the body and that they are excreted in the urine practically unchanged. Nevertheless they continue to be exploited widely in the form of various nostrums.

One of the most widely advertised — hence one of the most popular — of these is Fellows' syrup of the hypophosphites. It contains several bases, in combination with hypophosphorus acid, quinin and strychnin, to which is probably due any medicinal value that the preparation may have. It is unnecessary to prescribe an expensive nostrum of this type merely because one wishes to give his patient small doses of quinin or strychnin. The official compound syrup of the hypophosphites is little better than the nostrum just mentioned, and contains nine supposedly medicinal ingredients in syrup. It is not in keeping with modern therapeutic teaching to use such complex mixtures.

The continued influence of Churchill's teaching is also evident in the formulas of many of the proprietary emulsions of cod-liver oil that are advertised to physicians and to the public. Nearly all of them contain mixtures of hypophosphites that can serve no useful purpose, but usually render the preparation more disagreeable to the taste.

When it began to be accepted by educated physicians that the hypophosphites were superfluous, other phosphorus compounds were introduced and glycerophosphates, lecithin and nuclein were offered.

Lecithin is abundant in various tissues and is especially abundant in eggs, but it is sometimes claimed that the raw or combined forms of lecithin, such as that existing in eggs, cannot be utilized so well as the uncombined. It is obvious, however, that the healthy organism is capable of obtaining its normal supply from the lecithin-bearing compounds of the food, and there is no evidence that the free substance is ever necessary. The average diet of a healthy man contains from 5 to 15 gm. (75 to 225 grains) of lecithin, and this can be increased easily when patients can take an abundance of egg-yolk.

Glycerophosphoric acid consists of phosphoric acid in which an atom of hydrogen has been replaced by the glycerin radical, and has the formula $H_2(C_3H_5(OH)_2)PO_4$. The glycerophosphates of calcium and of sodium are described in New and Nonofficial Remedies.

Lecithin consists of the ester of oleic, stearic, palmitic or other fatty acid with glycerophosphoric acid combined with cholin; hence it is spoken of as a phosphorized fat. The lecithins obtained from different sources differ somewhat in their composition, but this does not appear to be of any great importance in regard to their utilization by the body.

The nucleins consist of proteins combined with nucleic acid and are derived from the nucleoproteins of cells. Nucleic acid varies slightly but not essentially, in its composition, depending on the source from which it is obtained, that from yeast cells — the usual source of commercial nucleins and nucleic acid — containing almost exactly 10 per cent. of phosphorus.

The composition of the nucleins varies rather widely with the method of preparation, but nucleic acids are definite chemical substances. They may be decomposed, yielding phosphoric acid, a carbohydrate, and purin and other bases.

Liver, kidney, brain and sweetbread are rich in nucleoproteins, hence in nucleic acids, and these foods may be used when it is desired to administer nuclein or nucleic acid, but lean meats are relatively poor in nucleoproteins. The purin bases derived from nucleoproteins are the precursors of uric acid; hence brain, liver, kidney, and sweetbread are to be withheld when the formation of uric acid should be limited as much as possible.

Lecithin, the glycerophosphates, nuclein and nucleic acid are discussed in New and Nonofficial Remedies.

Sanatogen is one of the many compounds that are exploited as containing a particularly active form of phosphorus. This product has been referred to on several occasions in the reading pages of THE JOURNAL and is discussed at some length in "Nostrums and Quackery."

(*To be continued*)

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. ITS ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

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SATURDAY, JULY 3, 1915

A THIRTIETH ANNIVERSARY—PASTEUR AND RABIES

July 4, 1885, Joseph Meister, an Alsatian boy 9 years of age, was severely bitten by a rabid dog. This was the first human patient on whom, July 6, 1885, Louis Pasteur used the protective treatment for rabies which he had proved on animals. In a delightful little volume entitled "Pasteur and After Pasteur," Stephen Paget has well said that there ought to be a calendar of the healing art to remind us of all such days. In these turbulent times when men and nations are gaining everlasting reputations in the death-dealing art, when the names of great generals and brave admirals are on the lips of old and young alike, it is fitting that we should recall the glory of those who have succeeded in the beneficent work of rescue and in preserving rather than destroying life.

The story of Pasteur's great accomplishment in effecting the cure of rabies is fascinating in its details. By September, 1884, he had attained the last step of his method: he had proved that he could prevent the disease in dogs already bitten. Then came the crucial test on man, which event took place thirty years ago next Tuesday.

Pasteur's original method is still observed in essence if not in details in many parts of the world. Pasteur institutes devoted to the treatment of rabies are found in every civilized country. There are more than sixty of these antirabic clinics now in operation, the original Pasteur Institute of Paris having been opened in 1888.

What they have meant to humanity is best appreciated by comparing the prognosis of the past with the accomplishments of Pasteur treatment. When the infected wounds are promptly cauterized, the protection may be great. Usually this help is of little or no avail when the bites are multiple and lacerated; and when they are about the face and head, thorough cauterization is difficult or impossible. The statistics of Proust show that in a series of 117 cases which were not cauterized, there were ninety-six deaths; whereas there were only eighty-nine deaths among 249 cases in which cauterization was practiced. Let us contrast with these statistics of two generations ago the outlook as influenced by Pasteur's work. From 1886 to 1914 the world's record of death from rabies after antirabic treatment has been kept down to less than 1 per cent. Högyes has collected statistics for 54,620 persons treated at twenty-four institutes with a mortality of only 0.77 per cent. Bernstein's figures include 104,347 patients with a mortality of 0.54 per cent.

Surely these figures tell a victory against death in a way that puts the inhuman warfare of civilized nations in a sad light in comparison with this record, the fruits of one man's genius as a human benefactor. At this eventful anniversary we may recall the words of the chairman of the French Academy of Sciences when he arose to speak at the gathering before which Pasteur had described his first success in the treatment of rabies in man. "The date of the present meeting," he said, "will remain for ever memorable in the history of medicine and glorious for French science; for it is that of one of the greatest steps ever accomplished in the medical order of things — a progress realized by the discovery of an efficacious means of preventive treatment for a disease the incurable nature of which was a legacy handed down by one century to another. From this day, humanity is armed with a means of fighting the fatal disease of hydrophobia and of preventing its onset. It is to M. Pasteur that we owe this, and we could not feel too much admiration or too much gratitude for the efforts on his part which have led to such a magnificent result." Thirty years later these achievements have lost nothing of their original splendor.

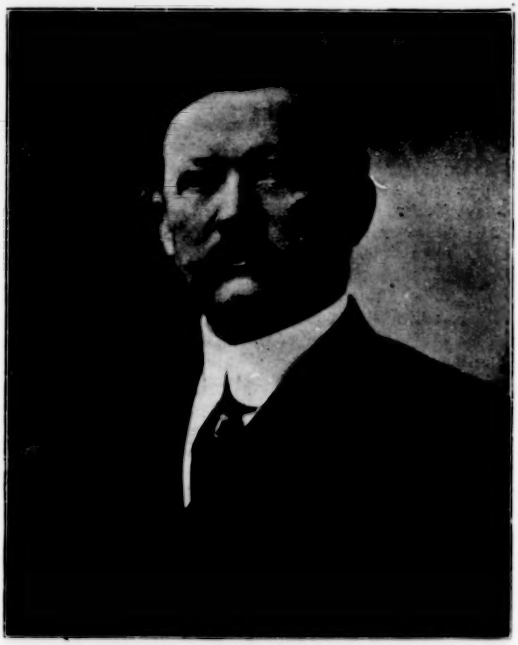
THE PRESIDENT-ELECT

In connection with the celebration of the opening of the Panama Canal, it was fitting that Surgeon-General Rupert Blue of the Public Health Service should be elected to the highest office within the gift of the Association at the San Francisco session. The attention being given to improvement of the public health renders significant the selection at this time of a public health officer. General Blue represents an arm of the federal government which is in reality a part of the medical profession; there is indication, therefore, that the ideals of the profession as voiced by the Association will be advanced. There is indication also that public health work will receive a more active impetus, and that the profession will assume in greater degree its responsibilities in respect to public health work and claim its inheritance in this field — in other words, that preventive medicine will become even a more active function of the Association than it has been in the past.

Born in North Carolina, Dr. Blue was educated at the University of Virginia, and received his medical degree from the University of Maryland in 1892. Immediately thereafter he entered the U. S. Public Health Service as intern, and became assistant sur-

geon in 1893, passed assistant surgeon in 1897, surgeon in 1909, and surgeon-general in January, 1912. During this time, he was stationed at Baltimore, Galveston, Charleston, San Francisco, Portland, Ore., Milwaukee, New York, Norfolk and New Orleans, having been assigned to hospital, quarantine and other public health duty, all of which has fitted him for the high office which he now holds in the government, and which enables him to foresee the great work ahead and the part the medical profession should play in it.

Dr. Blue was sent to Italy by the president when cholera threatened our shores in 1900. In 1905, he was second in command of the measures taken in New Orleans and vicinity to eradicate yellow fever. In 1903, and again in 1907, he was placed in charge of plague-eradicative measures in California, and handled a difficult situation with the result not only that the disease was controlled, but also that all interests in the state were harmonized. The last-mentioned is perhaps the most important single work he has performed, and during its conduct he advanced and proved the principle that rat proofing is the essential means necessary to prevent plague in urban communities. As a result of the enforcement of rat proofing, he has demonstrated that the eradication of plague is entirely practicable, and, in consequence, that cities may be kept free from the disease.



PRESIDENT-ELECT SURGEON-GENERAL RUPERT BLUE
(Courtesy of Clinedinst, Washington, D. C.)

As director of sanitation of the Jamestown exposition, Dr. Blue had practical experience in the reduction of mosquito-breeding areas to prevent malaria. This work was in line with his interest in tropical diseases, which interest was later responsible for his making a special study of those diseases at the London School of Tropical Medicine, and for his assignment as adviser to the governor of Hawaii for the reduction of mosquito-breeding areas in that territory, with the object of guarding against the introduction of yellow fever and malaria after the opening of the Panama Canal. It was from this duty that he was called to become the chief of his service.

Perhaps the most significant achievement of Dr. Blue's career, however, has been the remarkable development of public health work under his direction, especially as relates to scientific research. Public health education by the federal government is important, but the conduct of investigations along broad lines, and continuously followed, is by all odds the most important function of the federal government in matters affecting the public health. These he has encouraged, as is evidenced by the many lines of new work undertaken in the recent past. Some of this work has been done in cooperation with other branches of the government, and a cordial system of cooperation seems to be one of the means taken now to advance public health work on the part of the government.

In no country, perhaps, is there a larger or better public health organization than in our own; but under present auspices it may be expected that this service will enlarge and become a governmental branch second to none, and fulfil the ideals which have been held by the profession and the American Medical Association for more than a quarter of a century.

THE WAR AND PRACTICAL DIETETICS

That "necessity is the mother of invention" is illustrated by a multitude of surprising instances from the chapters of history. The present European war and the situations which it is creating have brought fresh evidence of the compulsory adaptation of new devices and the enforced acceptance of previously undesired methods. One might well expect this in the domain of

the mechanic arts and the manufactures; but in the field of practical dietetics, in which the laws of nutrition, the food habits of generations and the inherited tastes of individuals play so dominant a part, revolutionary changes seem less likely to make any headway.

Prof. Adolf Schmidt[1] of the Medical Clinic at Halle has pointed out some unexpected situations created by the growing necessities of the war on the continent, calling for a change in the dietary of the German people. Every race diet has developed on the basis of products of the soil of the country. This was the invariable rule so long as means of transportation between different countries were primitive; but it is still a valid rule, as is notable in the case of those nations which have long since ceased to produce enough food from their own soil. The habits of taste have lasted longer than the food supplied by their own soil, and their needs are satisfied by importation. War, however, has interfered with this method of satisfying the acquired tastes. It has become advisable for economic reasons to restrict the consumption of many of the more popular and highly palatable foods, such as meats, eggs, and butter, all of which are digestible and nutritious. They must be replaced by less valued, coarser foods, of which rye bread, potatoes, vegetables and fruits are conspicuous examples. Sugar is available in great abundance as a carbohydrate nutrient, but obviously it should not be excessively employed in the diet.

A critical consideration of the shift in dietary components demanded by the exigencies of the times will reveal that it involves a change from a regimen abundant in protein, particularly in the form of animal foods, and relatively poor in cellulose-yielding products, to a dietary lower in protein and richer in the coarser cellulose-containing vegetables. In essence it represents the adoption of a vegetarian dietary.

Some of the prominent students of nutrition have long insisted that the present-day diet of the well-to-do is not in itself physiologically justified. In tracing the history of the present tendencies on the continent, Rubner[2] has pointed out that among the materials successfully used in the culinary art, a high place has always been held by the meat of mammals, fowls and fishes. These meats were the chief part of the meal, other foods of vegetable origin, as salads and vegetables, sweets and flour foods, being added. Bread remained in the background. The traditions of this culinary art have remained the same down to our days. The diet of the upper classes is the only one which provides the pleasures of the table; it is rich in protein and fat, it is not voluminous, does not overburden the stomach, tends less to obesity than any other diet, keeps the body, even of a lazy man, in good condition, and does not overwork the digestive functions. The less well-to-do reduce, of course, the amount of meat; but they use in its place bread and potatoes. This is called a mixed diet.

When the barriers between the classes fell, the middle classes gradually rose to the more luxurious food of the formerly privileged classes. The consumption of meat per head of population in Germany has risen three and a half fold during a hundred years, and now approximates that consumed in England and in the United States. In 1813 the consumption of meat in Germany per inhabitant was about at the level of that in Italy today. The large use of meat has come with the concentration of population in the cities. The same transformation has taken place in the United States. In 1820 only 5 per cent. of the population lived in cities of 8,000 and over, whereas, in 1910, 33 per cent. lived in such cities. This third of the population demands meat in increasing quantity, despite its increasing price.

In common with other modern writers, Rubner contends that this conventional diet of the well-to-do is not even healthful; for, on account of false notions of the strengthening effect of meat, too much meat is used by young and old and by children, and this is harmful. But this meat diet is publicly sanctioned; it is found in all hotels, it has become international and has supplanted almost everywhere the characteristic local culinary art. It has also been adopted in countries in which European culinary art was unknown. Long ago the medical profession started an opposition to the exaggerated meat diet, even before the vegetarian propaganda was started. It was maintained that flour foods, vegetables and fruit should be eaten in place of the overlarge quantities of meat.

The situation created by the war, accordingly, is likely to enforce on a large, national scale the experiment of a reduction in meat consumption and an increase in vegetarian directions which many physiologists have advocated. Schmidt has remarked that it will be interesting to observe whether the contentions of the former enthusiasts prove true — whether the incidence of obesity, gout, kidney disorders, arteriosclerosis, neurasthenia, constipation and related disturbances becomes reduced as a consequence of the new standards of living. Several factors stand in the way of the successful introduction of the new dietary regimen. It is not easy to bring an intelligent appreciation of the situation to the attention of all classes of people in the countries involved. The lower strata in particular will object to the withdrawal of food privileges they had begun to enjoy. There may be danger of undernutrition where really palatable food is not readily available. The chief obstacle to the successful adjustment to the new standards is not in the nutritive inadequacy of the rations as such, but in large measure in the neglect of the art of cooking

1. Schmidt, Adolf: Volksernährung und Diätetik in Kriegszeiten, Therap. d. Gegenw., 1915, lvi, 81; abstr., The Journal, April 24, p. 1459.
2. Rubner, M.: The Nutrition of the People, Jour. Home Economics, 1913, v, 11.

among the lower classes. It is far easier to prepare a service of meat or an egg dish than a really palatable course of vegetables. Boiled potatoes, sauerkraut, turnips and fruits become far more monotonous than a repetition of cooked meat with bread and butter. Schmidt points out that few housewives understand the art of preparing a hundred and one acceptable concoctions involving the use of the cruder vegetables, nuts and fruits. Indeed, he looks on the education of the housewife in the details of vegetarian cookery as a great national need in Germany today.

Here in the United States, where fortunately the blessings of peace have averted the necessity of a shift in dietary habits, we may do well to read the lessons derived from the European situation. Practical dietetics has not attained the high regard and the consideration which it deserves among us. In a country where the physiologic chemistry of foods and the physiology of nutrition are as far advanced as anywhere in the world, where the pure food propaganda is pushed to its extremest limits, cookery has not received its due share of attention. The institutional diet kitchen conducted along scientific lines is mostly a dream of those who appreciate its possibilities. And among the masses, ready-to-eat foods attain popularity at enormous prices, in part because of the widespread ignorance of how to make a crude food palatable by culinary processes. We ought not to wait until an unexpected necessity drives our American homes to learn the uses of the kitchen and to discover that it can often convert the coarsest products into table delicacies.

EMOTIONS AND DISEASE

The mental attitude of a patient is often an important factor in the outcome of his illness. In the light of present knowledge of bacteria and bacterial toxins, to attribute the onset of disease to mental states such as fear will undoubtedly encounter objection. Jensen,[1] however, believes that many instances of intestinal intoxication result from long-continued worry, fear and allied depressing states. His explanation is based on an analogy between physiologic changes which are thought to occur in shock and as a result of fear. Whether or not we choose to accept such a view, efforts at generalization are always stimulating and interesting.

A knowledge of the bacterial flora of the intestine or of the chemical end-products of these bacteria does not offer the key to the solution of intestinal intoxication. These are already fairly well known. The factors which are responsible for intestinal stasis and for the breakdown of the defensive mechanism of the body, which allows the passage of toxins through the intestinal wall and into the blood stream, are certainly of importance in the explanation of this condition.

In shock, splanchnic changes occur which may be responsible for increased absorption. The effects of shock during abdominal operations are described as a deep injection and distention of the intestine. The vasoconstrictor fibers of the splanchnic area are paralyzed, and distention of the bowel is a paralytic phenomenon primarily, not one of gas formation. The face and extremities become pallid because the blood has collected in the dilated splanchnic vessels. For the same reason the blood pressure falls. The beneficial effects of saline transfusions during shock are probably attributable to raising of the blood pressure and thus restoring a vital equilibrium. As a result of the intestinal paralysis, decomposition of food and the production of bacterial toxins are heightened, and at the same time conditions favoring increased absorption are at hand. Among these are an increase in the size of the inner surface of the bowel, giving a greater absorbing surface. Loss of vascular tone with dilatation of the blood vessels results in a slowing of the blood stream, and consequently a larger volume of blood is present and remains longer in the absorptive region. Finally, the intestinal walls and the vessels are both thinned, allowing absorption to occur more readily.

Jensen maintains that pain, worry and other unpleasant emotions, which he roughly classes under one head as fear, are likewise capable of producing dilatation of the intestines and of the splanchnic vessels. He holds that the pallor, faintness and gastro-intestinal and vesical disturbances which accompany fear are a result of this splanchnic dilatation. The fecal evacuation may be due to a sudden dilatation of a contracted pelvic colon and the dropping of feces into that part of the rectum which has to do with the evacuation reflex. The desire to micturate caused by worry or fear may be explained similarly. The loss of tone of the smooth muscle allows urine to escape through the relaxed internal sphincter, and, striking the posterior urethra, the urine stimulates the inhibitory reflex and results in a clamping down of this portion of the urethra and at the same time violent contractions of the walls of the bladder. Jensen defines worry as "a succession of fear states causing a loss of tone which becomes chronic." If worry in this sense causes intestinal stasis and increased absorption, it is conceivable that even when fear is removed, the intestinal tract may not be able to regain its tone for some time, since stagnation of blood in the splanchnic region would produce some degree of cell asphyxia, and even with restored normal conditions, time would be required in the repair of these changes. The advent of other periods of worry, bringing a return of splanchnic dilatation, would thus tend toward a continued intestinal stasis. Further, the formation of a habit

1. Jensen: Lancet, London, 1915, clxxxviii, 231.

of worry or fear has a lowering effect on the mental energy, and this in turn leads to an increased loss of tone and the development of a psychophysical vicious circle.

If Jensen's hypothesis is true, that intoxication depends on loss of visceral tone and that mental states influence the latter, then, since fear can paralyze the hollow viscera, it should follow that happiness and courage can cause splanchnic constriction and thus lessen the degree of absorption. Clinically this seems possible, since the journey back to health for many a patient has commenced when hope and courage were instilled into him. The so-called cures by the followers of Mrs. Eddy and allied cults must be explained on the basis that improved mental conditions aid in recovery from disease.

THE CULTIVATION OF VACCINE VIRUS IN VIVO

The desirability of obtaining a vaccine virus free from extraneous organisms is evident. In the vast majority of vaccinations, especially in later years, no ill effects have followed; occasionally, however, owing chiefly to the presence of extraneous organisms, a severe reaction at the site of vaccination occurs. This has been severe enough at times to raise objection on the part of others to submitting to vaccination. For this reason, efforts have been made by laboratory workers to reduce the number of bacteria in vaccine virus, either by growing the organism in pure culture, or by subjecting the vaccine pulp to the action of various antiseptics, or by a passage through the skin of certain animals, such as the rabbit, to bring about the same result.

Usually in the preparation of vaccine virus, glycerin in different percentages is added to the vaccine pulp, and the resulting mixture is allowed to remain at room temperature for a period, during which there results a great decrease in the number of nonspore-bearing bacteria. Some strains of virus have become accustomed to certain germicides, such as phenol (carbolic acid) by a gradual increase in the amount added to the pulp in successive generations. This has also had the effect of reducing the number of extraneous nonspore-bearing bacteria; but no methods heretofore used have had any very marked effect in reducing the number of spore-bearing bacteria.

Recently Noguchi[1] has reported the successful propagation of the organism of vaccine virus through sixty generations in the testicle of the rabbit. He has also reported the propagation of vaccine virus in the testicle of bulls. Henseval and Convent,[2] as early as 1910, attempted to use the testes of rabbits for the cultivation of vaccine virus, but their results were hampered by the fact that they failed to obtain a bacteria-free virus for purposes of inoculation. Noguchi has overcome this complication by freeing his vaccine virus of bacteria as a result of exposure of the emulsion of vaccine virus to ether. This bacteria-free virus was used for the inoculation of the testicles of rabbits. The multiplication of the virus within the testicle reaches its maximum on the fourth or fifth day after inoculation, and the quantity of virus apparently remains stationary until the eighth day, when diminution begins. At the end of five weeks, no more virus could be detected in the testicle. When tested for activity in the skin, cornea and testicle of rabbits, it was found that the reaction was practically identical, whether the virus employed for the inoculation was the original strain or the pure testicular strain, and the skin lesions produced in the calf with the two strains appeared to be identical. It was found that immunity could be conferred in rabbits by inoculation with the testicular strain against the skin strain of virus, as well as the converse of this. Several persons were vaccinated with the testicular strain of virus, and it was found that these persons reacted to the pure testicular strain in an entirely typical manner, including those in whom an original vaccination or revaccination was done. The vaccinal effects could not be distinguished from those arising from uncomplicated skin virus.

The practical importance of this work lies in the possibility of the propagation of vaccine virus free from bacterial contamination, thus removing all danger of accidental infection through the introduction at the time of vaccination of extraneous bacteria. It is almost impossible in the propagation of vaccine virus by the methods ordinarily practiced to obtain virus entirely free from bacteria, although many samples of vaccine virus have been examined in recent years showing that the number of bacteria per vaccine is extremely low. Noguchi believes that a comparison of the cost is in favor of the rabbit vaccine. He believes that for the propagation of 1,000 c.c. of finished vaccine, it would require about forty rabbits or four calves, and that the initial cost of the rabbits would be the smaller.

1. Noguchi, Hideyo: Pure Cultivation in vivo of Vaccine Virus Free from Bacteria, Jour. Exper. Med., 1915, xxi, 539.
2. Henseval, M., and Convent, A.: Contribution à l'étude expérimentale: l'injection de vaccine dans le testicule, Bull. de l'Acad. roy. de med. de Belgique, Series 4, 1910, xxiv, 635.

Soda Fountains as Sources of Infection.—A. J. Lanza of the Public Health Service in an article in *Public Health Reports* on the interstate migration of tuberculous persons, says that soda-fountain utensils are common eating and drinking devices in the most vicious sense of the word. He has seen advanced consumptives at soda fountains, and as soda fountains are a common rendezvous for children, the danger is apparent. Soda-fountain attendants are likely to be careless in the handling and washing of cups, spoons and glasses, and he has observed on more than one occasion advanced consumptives put down glass and spoon which were then carelessly rinsed in standing water and placed on the shelf for the next customer. He says that in hotels, cafés and other eating places tableware is generally cleaned in machines, or at least soap and hot water are used, and while potentially sources of infection, the danger would be less than by the careless rinsing that suffices at soda fountains.

Current Comment

ACCIDENTS FROM BENZIN

Recently published statistics[1] regarding accidents in Germany from benzin during the year 1914 remind us that danger from industrial products or occupations could be averted if there were more widespread intelligence regarding the behavior of the materials used or the ways of supplying innocuous procedures. How serious the harm from benzin may be is illustrated by the fact that out of the reported accidents, 120 deaths and 154 serious injuries resulted in a single year. Most of these occurred in connection with the automobile traffic or the technical use and transport of benzin. Many arose from the household uses of the substance. Benzin is widely employed in the work of chemical cleaners and dyers. If it were widely realized that noninflammable substitutes for benzin[2] exist which are perfectly suited for most uses except power production and illumination, a considerable conservation of human life might result.

ARSENIC IN THE HAIR

The distribution of arsenic, after its introduction into the body, and the subsequent mode of elimination, are topics that have had a twofold significance. They are related to the therapeutic use of the substance as a drug, which is certainly not decreasing at the present time; and they have a bearing on the deportment of arsenic as a poison, and its consequent connection with medicolegal problems. Not infrequently, such questions as the possible earlier therapeutic administration of arsenic in cases of suspected acute poisoning, or the postmortem introduction of the element, have been confused by the conflicting nature of the evidence which the literature of toxicology has afforded. Ordinarily, it is stated that arsenic is excreted essentially by the kidneys. The elimination begins very soon after the administration, and may be prolonged for days and even weeks. The length of time varies in different reports according to the dosage, its possible repetition and perhaps other undiscovered factors. The intestine has played an insignificant part in the consideration of the removal of arsenic from the organism, except so far as ingested portions have failed of absorption. We are now assured on the authority of Professor Heffter,[3] the pharmacologist of the University of Berlin, that the skin and its appendages must also be looked on as a seat of elimination. The intake of both organic and inorganic compounds of arsenic into the organism in any way whatever, whether in repeated or single doses, leads to its deposition in the hair. This process is dependent on the continuation of life. Dead hairs do not take up arsenic. The element is present in the hair structure in a combination insoluble in water or alcohol, and its content may vary in man from one to five parts per hundred thousand. This inclusion in a part of the body destined to be cast off—a phenomenon which has, of course, been known for some time—may be looked on as one mechanism for ridding the organism of foreign substances. The entrance of arsenic into the hair proceeds more slowly and later than its deposition in the abdominal viscera. In rapid acute intoxications, the latter may exhibit the presence of arsenic without its having penetrated into the hair. In continued arsenical therapy, it may be fourteen days or longer before arsenic appears in the hair. On the other hand, the element vanishes with extreme slowness from the hair, so that its presence may still be demonstrated after months and even years. Arsenic can sometimes be found in the hair after it is no longer detectable in the liver or bones. The hairs retain the poison, and its excretion by means of these epidermal structures requires a long time. This fact involves a feature of medicolegal importance. The presence of arsenic in internal organs and its absence from the hair points to an acute form of intoxication. When the hairs are found to contain arsenic, while it is missing from the viscera, an earlier occasion of its introduction must be thought of. Indeed, Heffter asserts that an examination of the hair during life for arsenic is likely to verify or disprove the existence of a chronic form of intoxication with it.

1. Ztschr. f. angew. Chem., 1915, xxviii, 73. Jour. Indust. and Eng. Chem., 1915, vii, 542.
2. Benzin, one of the distillation products of crude petroleum, consisting of a mixture of hydrocarbons of the fatty acid series, must be distinguished from benzene, more frequently called benzol, which is the aromatic organic substance C_6H_6.
3. Heffter, A.: Ueber die Ablagerung des Arsens in den Haaren, Vrtljschr. f. gerichtl. Med., 1915, xlix, 194.

ANCIENT AND MODERN QUACKERY

Some of the mysteries of ancient poison lore and the intricacies of medieval pharmacy almost baffle our modern intelligence. It is not so difficult to appreciate the force of superstition, for that we have still with us today. Symbolism varies with the ages, but it is not lacking even in the most radical and up-to-date manifestations of human conduct. Yet we like to think of our times as essentially reformed and refined, freed from the indefensible prejudices of the dark ages. There is a fascination by way of assumed contrast in studying the medical and therapeutic ways of the earlier centuries. An essay by Dr. Corner[1] of the Johns Hopkins Hospital considers some of the famous remedies of old medicine. Among these was the famous theriaca of Mithridates Eupator, popular for centuries and prepared in later years at an enormous price out of more than half a hundred ingredients. It has been described as "an opiated sudorific, a sort of glorified Dover's powder." How history repeats itself will be suggested to modern students of the healing art from the fact that when the fame of theriac had become great, the drug passed out of the hands of physicians and became an article of commerce among the people. The troop of triacleurs has been replaced by the nostrum venders of the enlightened twentieth century. Psychology has certain constants that seem to represent limitations of the human mind. According to Corner, the elaborate public preparation of theriac by the Société de la Theriaque, corresponding to a modern patent-medicine syndicate, continued at

1. Corner, G. W.: Mithridatium and Theriac, the Most Famous Remedies of Old Medicine, Bull. Johns Hopkins Hosp., 1915, xxvi, 223.

Paris until nearly the beginning of the nineteenth century. He relates how the solemn ceremonies lasted from fifteen to seventeen days, beginning at 5 a. m. The session was opened by the presidents of the college of apothecaries and the faculty of medicine, the lieutenant-general of police and the king's procurator. The person to whom had been given the honor of making the theriac (and who evidently corresponded to the bewhiskered individual photographed on the label of the modern sure cures) addressed the audience, lauding the virtues of the drug, usually with many quotations from the ancients and much show of oratory. How much all of this sounds like the "testimonial" ceremony of an advertised nostrum! The dignitary gave a scientific description of the ingredients, exhibited them to the public gaze, and finally weighed and mixed them. The finished product was stored in a porcelain jar about three feet high (still extant in Paris) which was locked with three locks, the keys of which were held by three officials high in the councils of the apothecaries. Several times during the fortnight of preparation there were addresses and collations. "It is easy to see the psychologic and financial advantages of such pomp and circumstance," Corner writes. And he adds, "Imagine the effect of a public preparation of peruna on Mount Vernon Place in Baltimore, with addresses by the mayor and state chemist, the medical faculties attending in academic robes, assisted by Sousa's band!"

COMMEMORATION DAY AT SAN FRANCISCO

Before audiences that taxed the capacity of the halls, Commemoration Day Exercises were held at San Francisco. At the morning session President Rodman of the Association delivered a tribute to the work of Major-General Gorgas, who was, however, unable to be present. The addresses by Drs. Victor C. Vaughan, William J. Mayo, and William Allen Pusey, concerning infection and immunity, cancer, and syphilis, were greeted with exceptional interest. The setting apart of one day of the session as a tribute to the work of the medical service in the Canal Zone, which made the Panama Canal and the Exposition possible, was a particularly appropriate innovation.

Workmen's Compensation Laws.—The supreme court of Massachusetts has recently construed the workmen's compensation law of that state, which provides for compensation for "personal injuries arising out of and in the course of" workmen's employment to cover such cases as the following: A cook employed on a lighter had valvular heart disease. Through extra exertion in trying to save his effects when the lighter sank, his trouble was aggravated and he died. The industrial accident board found that his death arose out of and in the course of his employment, and this was upheld by the court. An optic neuritis with consequent blindness from poisonous gases which a workman came in contact with in the course of his work was held as a "personal injury" within the provisions of the statute. Occupational lead poisoning was also held by the court as included within the terms of the act. This stand of the court would indicate that in Massachusetts at least any of the occupational diseases would be considered within the purview of the compensation law.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST; SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CONNECTICUT

City Physicians Appointed.—Dr. Jacques H. Green, Waterbury, has succeeded Dr. Joseph F. Watts, Waterbury, as outside physician for the poor of Waterbury.——Dr. John J. Egan, Waterbury, has succeeded Dr. Arthur F. McDonald, Waterbury, as inside physician at the City Hospital, Brookside, Waterbury.

Public Health Legislation of 1915.—The general assembly, which adjourned last month, passed some excellent public health laws and improved by amendment some older laws. Among these may be mentioned: An act concerning the pollution of our inland and tidal waters; an act concerning the pollution of water supplies, which provides that no system of water supply shall hereafter be constructed until the plans thereof have been submitted to and approved by the State Board of Health; the board is empowered to make such orders as may be necessary to prevent the contamination of these supplies; an act amending an act concerning the appointment and duties of school physicians; this act makes the medical inspection of schools obligatory in all cities, towns or districts of more than 10,000 inhabitants; an act concerning town ordinances; this permits any town to adopt ordinances or by-laws for the promotion of health and to improve the sanitary condition of dwellings, outbuildings and premises connected therewith; an act concerning chiropody, requiring the licensing of all chiropodists after Jan. 1, 1916, and creating a state board of examiners; an act concerning the transportation of the bodies of deceased persons, authorizing the State Board of Health to make regulations concerning the preparation and transportation of bodies from or into any town or state; an act amending an act concerning the bottling and sale of drinking water; this act reduces the fee for the renewal of a license from $10 to $5; an act concerning the sale of narcotic drugs, which brings the state law into harmony with the national law, known as the Harrison Narcotic Act; and an act prohibiting advertising by fortune tellers, palmists, clairvoyants, etc., and the taking of money by fraudulent devices.

ILLINOIS

Masonic Hospital to be Dedicated.—The new Royal Arch Memorial Hospital at the Illinois Masonic Home, Sullivan, will be dedicated, July 5. Dr. Ralph H. Wheeler, as general chairman, will have charge of the ceremonies at which addresses will be delivered by General George M. Moulton, Chicago, and H. H. Montgomery, Carrollton.

Personal.—Dr. William P. Davidson, Sullivan, who received an impacted fracture of the anatomic neck of the right humerus by the overturning of his automobile, near Danville, recently, is improving and will soon be able to attend to his practice.——Dr. Egbert K. Dimmitt, Farmington, is seriously ill with disease of the liver in a hospital in Peoria, but is said to be improving.

Chicago

Billings Made Master of Science.—Harvard University, June 24, conferred the degree of Master of Science on Dr. Frank Billings, in recognition of his achievements in medicine.

School of Instruction for Midwives.—At a meeting of a subcommittee of the health committee of the Chicago city council, which is investigating illegal operations, it was recommended that a portion of the Iroquois Memorial Hospital be set aside and maintained as a school of instruction for midwives.

Coroner's Commission Issues Accident Prevention Book.—"Things You Must Know for Safety," is the title of the latest book issued by Coroner Hoffman's public safety commission. It contains thirty-two illustrations of preventable accidents, and figures showing that the coroner's campaign has been the means of reducing the number of fatalities.

IOWA

Health Survey.—Arrangements have been made for a health survey of Dallas County, which will be under the charge of Asst. Surg. K. E. Miller, U. S. P. H. S., and four

assistants. A house-to-house canvass of the county will be made and a campaign of education carried on.

Pathologic Laboratory at Waterloo.—Preliminary steps toward the installation of a pathologic laboratory at Waterloo were taken at a meeting of the Waterloo Medical Society, June 16, at which a committee of three, consisting of Drs. Frank W. Porterfield, Frank T. Hartman and Charles A. Waterbury, was appointed to visit the pathologic laboratories at Rochester, Minn., and Chicago, to purchase the necessary equipment for the laboratory and employ a director.

Northwest Iowa Physicians Organize.—The Northwest Iowa Medical Society met for permanent organization at Sheldon, recently, and adopted constitution and elected the following officers: president, Dr. William H. Myers, Sheldon; vice president, Dr. Louis L. Corcoran, Rock Rapids, and secretary-treasurer, Dr. Jay M. Crowley, Rock Rapids. The territory covered by this society includes the four northwest counties of the state.

Personal.—Dr. Cleanthus E. Birney, Esterville, who has been critically ill with tetanus, is reported to be convalescent. ——Dr. Bundy Allen, Keokuk, has been elected to the chair of roentgenology in the University of Iowa, Iowa City.——Dr. James M. Howe, Hillsboro, was seriously injured in a collision between his automobile and a passenger train near Hillsboro.——Dr. Charles S. Woods, professor of preventive medicine in the Iowa State University, Iowa City, and state epidemiologist has resigned, his resignation becoming effective July 1.——Dr. Harve Ellis Harlow, in charge of the Pasteur department of the State Bacteriological Laboratory, Iowa City, has resigned and will engage in private practice. ——Dr. Thomas F. Kelleher, Des Moines, who has been seriously ill, is reported to be improving.——Dr. Mamie A. Coveny, Clinton, who was seriously injured in a fall as she was alighting from a street car, sustaining a dislocation and fracture of the humerus, is reported to be convalescent.

MARYLAND

Personal.—Dr. John A. Campbell Colston, Baltimore, one of the Red Cross surgeons stationed at Pau, France, has been promoted to the rank of senior surgeon to succeed Dr. E. Kirby Smith, who was the head of one of the two units stationed there and who resigned to go to Serbia to aid in the extirpation of typhus. After eleven months' service in France, Dr. Colston will leave for Baltimore, August 1.——Dr. Thomas L. Shearer, Baltimore, who was appointed by the British government after the beginning of the war as examining physician of candidates, has sent a great number of ex-British service men to New York for enlistment.——Dr. John C. Hemmeter, who has been seriously ill with appendicitis at his home on University Parkway, Baltimore, is reported to be very much improved, and his physicians, Drs. Lewellys F. Barker and Robert P. Bay, are now almost certain that he will not have to undergo operation.——Dr. William L. Smith, Riderwood, who has been ill, is reported to be improving.——Dr. William H. Welch of Johns Hopkins University left Baltimore, June 30, for China as one of the commission having for its object the systemization of medical education in that country.

MICHIGAN

Leprosy in Michigan.—Secretary John M. Burkart, secretary of the State Board of Health, states that there are six known cases of leprosy in the state.

Rare Cattle Disease Found.—Under date of June 12, it was reported that hemorrhagic septicemia was discovered among cattle on a farm near Forest Hill, Wexford County, and state pathologist Dr. E. T. Hallman is in charge of an investigation. Cultures have been made from the afflicted cattle. The disease is a very fatal one, from 50 to 90 per cent. of cattle affected, dying. It does not become so rapidly general as does foot and mouth disease.

Personal.—Dr. John N. E. Brown has been appointed superintendent, Dr. Angus McLean, chief of the surgical staff, Dr. Frank J. Slade, chief of the medical staff, and Dr. James E. Mead as the personal representative of Mr. Henry Ford, on the advisory board of the Henry Ford Hospital, Detroit. At present the hospital has 100 beds, but extensions will be made eventually for a 2,000 bed hospital, each patient having a private room.——Dr. Florence Huson, Detroit, who was stricken with cerebral hemorrhage in May, is reported to be critically ill.——Dr. Winfield S. Rowley, South Haven, was knocked down by an automobile and seriously injured, June 18.——Dr. Romeo H. Earle has resigned as a trustee of the village of Wayne.——Dr. Albert H. Beifeld, Ann Arbor, has been appointed professor of pediatrics in the Iowa State University, Iowa City, and head of the new detention hospital for which expenditures of $40,000 have been ordered.——Dr. Edward T. Abrams, Hancock, has been elected vice president of the State Board of Health.——Dr. Joseph B. Whinery has been elected chief of staff; Dr. Rowland S. Webb, vice chief of staff, and Dr. George H. Southwick, secretary of the medical staff of Butterworth Hospital, Grand Rapids.——Dr. Dave B. Downing has resumed his duties as city physician of Detroit after five months' enforced idleness on account of diphtheritic infection of the eye.——Dr. Alexander McK. Campbell has been appointed surgeon at Grand Rapids for the Grand Rapids, Kalamazoo, Battle Creek and Allegan branch of the Michigan Railway Company, and Dr. Roy Thomas Urquhart, eye and ear specialist for the company.

MISSISSIPPI

Personal.—Fire at Summit recently caused serious damage to the building of Dr. J. R. Sample.——Dr. Louis H. Howard, Jackson, placed in charge of health affairs in the British, Dutch and French West Indies by the International Health Commission, has assumed his new duties, with headquarters at Trinidad.——Surg. Rudolph H. von Ezdorf, U. S. P. H. S., assisted by Tech. Asst. H. A. Taylor of the same service, is making a malarial survey of Lucedale and the vicinity.

State Board Matters.—Dr. Charles E. Catchings, Woodville, president of the State Board of Health, resigned at the semiannual meeting of the board, June 14, and Dr. S. Wade Glass, Lyon, was elected his successor.——Dr. Dudley W. Jones, Brookhaven, has been elected chief sanitary inspector of the board, succeeding Dr. Willis Walley, Richton.——The board adopted regulations providing that cuspidors be not allowed on railway coaches except in the smoking room; that every county courthouse shall be provided with a sanitary drinking fountain; that the use of the public drinking cup be prohibited; that all straws at soda fountains shall be protected from flies and dust by being kept in proper containers; and that any person, firm or corporation producing milk or by-products for public consumption in any public place, shall conform to all the rules and regulations of the State Board of Health pertaining to dairies.

NEW JERSEY

Rockefeller Foundation Laboratory.—The Rockefeller Foundation for Medical Research has begun work on the establishment of a hospital near Princeton for the study of diseases of animals. The ground, building and equipment of the laboratory will cost about $1,000,000, and the institution will be under the direction of Dr. Theobald Smith, professor of comparative pathology at Harvard University.

Personal.—Dr. Theodore W. Corwin has been elected president of the board of managers of the State Home for Tubercular Patients, Glen Gardner. Dr. W. C. Merritt of the staff of the institution has resigned and will practice in Petersburg, Va.——Dr. Charles S. Pancoast, Camden, is surgeon on the staff of General Gyula Dollinger, chief surgeon of the Hungarian army, in the Royal Hungarian Hospital, Budapest.

NEW YORK

Municipal Workshop for Tuberculosis Patients.—Plans have been perfected by the city health department of Buffalo to open a municipal workshop for the convenience of tuberculosis patients in connection with the Municipal Tuberculosis Hospital.

Personal.—Dr. Lawrence Hackett, Buffalo, has been secured as physician in charge of the bacteriologic laboratory to be started in Allegany County.——Dr. Leslie M. Wilkins, Lackawanna, was slightly injured in a collision of automobiles near Buffalo, June 15.

Laboratory Donated.—Willis Sharpe Kilmer has presented a fully equipped pathologic laboratory to the Binghamton City Hospital, and has agreed to maintain it for a term of years. The Binghamton Academy of Medicine, at its meeting June 15, voted to express to Mr. Kilmer the appreciation of the society for his gift.

Child Welfare Campaign.—The Child Welfare Exhibit has been on a tour through the northern section of the state during the past few months, and it was gratifying to note the large attendance at the public meetings. As a result of this exhibit, infant welfare stations have been authorized and will be established in Malone, Plattsburg, Ogdensburg and

Watertown. Little Mothers' Leagues were established in the schools in all the cities visited.

New Home for Convalescents.—The Burke Foundation for Convalescents, with a main institution for adults now open at White Plains, N. Y., is about to establish a thirty-bed branch for boys' convalescence at Bronxville, using the old country home and farm of the donor, the late Mr. John M. Burke. Boys from 10 to 16 will be taken free. It will be known as the "Sunny Brae, Boys' Branch," and will be under the direction of Dr. Frederic L. Brush, New York City, superintendent of the foundation.

New York City

Personal.—Dr. John C. MacEvitt, Brooklyn, had conferred on him the honorary degree of LL.D. at the St. John's College commencement in Brooklyn, June 11.

Convicted of Selling Wood Alcohol.—According to the Bulletin of the Department of Health, the Braustein Drug Co., Brooklyn, was convicted, June 3, in the court of special session of Brooklyn for selling wood alcohol for rubbing purposes labeled "alcohol." A fine of $200 was imposed and the justice suggested that the case be given wide publicity.

Lectureship Established.—Through the generosity of an anonymous donor, a lectureship has been established at Mt. Sinai Hospital in memory of the late Dr. Edward G. Janeway, who was for many years an associate of the medical staff of the institution. The foundation has been created for the purpose of inviting investigators to present the results before the staff of the hospital.

Simple Leaflet on Contagious Diseases.—During the school term of 1914 there were delivered to the teachers and pupils of the New York public schools 800,000 circulars regarding "The Getting and Spreading of Diphtheria, Scarlet Fever and Measles." To the teachers and pupils of the various parochial schools in the city were distributed 97,000 of these circulars. It is thought that the instruction will be welcome and that it will, in time, have a definite influence in reducing the prevalence of these diseases.

NORTH CAROLINA

For Care of Babies.—The James Walker Memorial Hospital, Wilmington, N. C., has donated the Bear Annex for the purpose of affording free treatment for infants of the community during the heated term. A sum of $3,000 has been secured for expense, and if the season's results are satisfactory, the management will likely build extensively for the continuance of this work in future summers.

State Health Officers Meet.—The fifth annual meeting of the North Carolina State Health Officers' Association was held in Greensboro, June 14, under the presidency of Dr. William M. Jones, Jr., Greensboro. "Sanitation in the Public Schools," "Rural Sewage and Its Disposal," "The Problem of Contagious Diseases," "The County Fight on Typhoid," were the four vital problems that occupied the session. The evening was wholly given to the tuberculosis problem. The following officers were elected: president, Dr. Daniel E. Sevier, Asheville; vice president, Dr. Charles T. Nesbitt, Wilmington; and secretary-treasurer, Dr. George M. Cooper, Clinton.

State Society Meeting.—The sixty-second annual session of the Medical Society of the State of North Carolina under the presidency of Dr. Lewis B. McBrayer, Sanatorium, N. C., was held in Greensboro, June 15-17. The annual meeting date was changed to the third week of April to avoid conflict with the American Medical Association sessions. The 1916 session will be held in Durham. The following officers were elected: president, Dr. Marshall H. Fletcher, Asheville; vice presidents, Drs. James L. Nicholson, Richlands; Dr. Lucius N. Glenn, Gastonia, and Dr. William H. Hardison, Creswell; secretary, Dr. Benjamin K. Hays, Oxford; and treasurer, Dr. William M. Jones, Jr., Greensboro.

Conjoint Session.—The annual conjoint session of the State Board of Health with the North Carolina State Medical Society was held in Greensboro. The State Laboratory of Hygiene reports a gain of 25 per cent. over the routine work of the previous year. It was announced that in accord with legislative action, the board proposed to establish at an early date a biologic plant for the preparation of vaccines, serums, etc. There was printed a monthly edition of 47,000 copies of the *Bulletin*, which is sent to every citizen desiring it. Health exhibits were held by the board in eight of the principal cities of the state, besides exhibits at Jacksonville, Fla., and one is now installed at the Panama-Pacific Exposition in San Francisco.

OREGON

Tick Fever.—Under date of June 16 Dr. Calvin S. White, Portland, Secretary of the State Board of Health, said that sixteen cases of Rocky Mountain spotted fever had been reported from eastern Oregon. It is announced that Surg. Lumsford D. Fricks, U. S. P. H. S., will be sent to Oregon to make an extended study of the disease in the state. Dr. Fricks has made similar studies in Montana, Idaho and Wyoming.

The Prevention of Tuberculosis.—At a meeting held in Portland, June 18, Dr. Kenneth A. J. Mackenzie, dean of the Oregon College of Medicine; Dr. Marius B. Marcellus, head of the Health Department; Mrs. Thomas Hunimon, vice-president of the Visiting Nurses Association; Mrs. Sadie Orr-Dunbar, corresponding secretary of the Oregon Federation of Women's Clubs, and Charles De Forest, field secretary of the National Association for the Study and Prevention of Tuberculosis, were appointed a committee to draw a tentative constitution and call a meeting in the near future for the formation of the Oregon Association for the Study and Prevention of Tuberculosis.

PENNSYLVANIA

Dispensary for Allentown.—The establishment of a free dispensary for the poor of Allentown was assured June 23, when it was announced that Mr. Max Hess had agreed to guarantee the salary of a physician to be in constant attendance at the institution. A committee was named to investigate suitable sites and make recommendations.

Druggists Adopt Policy of Publicity.—At the annual meeting of the Pennsylvania State Pharmaceutical Association, June 23, held at Forest Park, arrangements were made for a state-wide educational campaign by which the public is to be kept thoroughly informed in all matters in drug business and on legislature issues, particularly in their connection with public health and general welfare.

Philadelphia

Child Federation Appeal.—The Child Federation, to further its efforts for child welfare, has issued a strong appeal to fathers as voters to help better conditions of the neighborhood where they live.

Health Officials Appointed.—Miss Elsie Robbins has been promoted to third assistant bacteriologist in the Bureau of Health.——Edward A. Lees has been appointed assistant director of health and charities, succeeding Alexander M. Wilson, resigned, to become director of investigations in the department of charities in New York City.

Personal.—Dr. James K. Young has resigned the clinical professorship in orthopedic surgery in the Woman's Medical College of Pennsylvania, Philadelphia.——Dr. Hubley R. Owen, chief police surgeon of Philadelphia, is one of the representatives of the city government on the trip of the Liberty Bell to the Pacific coast.

Harrison Law.—Nine special "dope" cases were disposed of in the United States District Court on June 22. Convictions were returned in each case. Of the fifty defendants who were arrested and tried since the Harrison Law became active on March 1, not one case was lost by the government. All of the defendants either pleaded guilty or were convicted by a jury.

TENNESSEE

Personal.—Dr. Letcher E. Trent, Erwin, recently elected third assistant physician at the Iowa State Hospital, Mt. Pleasant, took up his new duties, July 1.

Leprosy.—What is said to be the first case of leprosy ever found in Tennessee has been reported from Dickinson County by the State Board of Health in the person of a 17-year-old boy who has been sent to the leper colony in Louisiana.

Tuberculosis Hospital for Prison.—Ground was broken, June 15, at the State Prison, Nashville, for a tuberculosis hospital, which is to be erected adjoining the east wall of the main prison. The hospital will cost about $20,000 and will accommodate 250 patients.

Physicians Preach Against Malaria.—Practically every pulpit in Memphis was occupied, June 20, by a physician of the city who expounded the gospel of malaria prevention. The program for Health Sunday was prepared by Dr. James L. Andrews, superintendent of the City Health Department.

VERMONT

Health Officers' School.—The seventeenth annual school for health officers of Vermont will be held in Burlington, July 19 to 22.

Cancer Study Meetings.—Under the auspices of the Vermont Medical Society and in its campaign to reduce the cancer mortality in the state, cancer study meetings were held at Rutland, June 8; Burlington, June 9; St. Johnsbury, June 10, and Montpelier, June 11. On each morning at 9 o'clock consulting and operating clinics were held. In the afternoon and evening addresses were delivered by Drs. Charles Francis Dalton, Burlington, secretary of the State Board of Health, on "Vermont's Cancer Situation," and "Is It Necessary for Vermont to Lose over Four Hundred a Year from Cancer"; by Jonathan M. Wainwright, Scranton, Pa., chairman of the Cancer Committee of the Medical Society of Pennsylvania, Scranton, on "The Field of the Medical Profession and the Laity in the Reduction of Cancer Mortality"; Dr. William Seaman Baimbridge, New York City, on "Some Practical Phases of the Cancer Problem," "What Can the People Do to Lower Vermont's Cancer Mortality," "A Stereopticon Cancer Clinic," "Danger Signals Illustrated," "The Cure of the Incurable," and "The Patient's Dilemma"; and by Dr. Francis Carter Wood, New York City, on "Practical Results of the Study of Cancer," and "What We Know About the Study of Cancer." The afternoon sessions were especially for the benefit of the medical profession, but the general public were invited to the evening sessions.

CANADA

Provincial Society Meetings.—The New Brunswick Medical Society will meet in Fredericton July 20 and 21.——The sixty-second annual meeting of the Medical Society of Nova Scotia will be held in Amherst, July 7 and 8, under the presidency of Dr. Charles A. S. McQueen, Amherst.

Sanitary Section Actively at Work.—The sanitary section of the army medical corps at Montreal was officially inspected June 16, and will shortly leave for the front.——Recruiting for No. 2 Field Ambulance depot, a session commenced at the Craig Street Drill Hall, Montreal, June 17. One company of twenty-seven men is to go forward to reenforce the companies already in the field.

Board of Health Officer Retires.—Hon. J. R. Armstrong, solicitor for the board of health of St. John, N. B., has retired after thirteen years' service. At a meeting held June 15, Judge Armstrong was presented with a cane and with an address expressing their regrets at the severance of his connection with the board and congratulating him on his appointment as county court judge.

University News.—Dr. W. A. S. Browne, Kingston, Jamaica, was the successful candidate for the McGill University, Holmes Gold Medal, for the highest aggregate in all subjects in the recent examinations.——The University of Manitoba has offered to provide the personnel of a stationary hospital for service in France. It will comprise nine physicians, seventeen nursing sisters and eighty-one rank and file.——The Western University, London, Ontario, proposes to erect a new medical building at a cost of $100,000.——The honorary degree of LL.D. was conferred on Dr. Francis J. Shepherd, Montreal, at the recent convocation of McGill University.——Dr. Edmond M. von Eberts, Montreal, has been appointed to administer and dispense the private funds of the McGill General Hospital, which, on last report, was to be located some 10 miles east of Calais.——The University of Toronto General Hospital for some weeks in England, at Folkstone, has not yet been assigned to duty. It may be sent to Malta or to Dieppe, France.

War News.—The Hon. Robert A. Pyne, Toronto, minister of education for Ontario, has left for England to confer with the War Office in connection with the proposal of the Ontario government to establish a war hospital in Britain.——A separate branch of the militia department of Canada is to be created to look especially after pensions. Medical boards are to be established in the various military districts of Canada to deal with the pensions for disabled Canadian soldiers. Another problem the Canadian government has to deal with is that of providing convalescent homes for returning soldiers.——Among others mentioned by Sir John French for distinguished service in the field, the names of several Canadian physicians appear. These are: Staff, Lieut-Col. Charles M. Foster, M.D., Toronto; Lieutenant-Colonel Ford; Lieut.-Col. David W. McPherson, M.D., Toronto; Lieut.-Col. Arthur E. Ross, M.D., Kingston; Major Hardy, M.D., Toronto; Lieut. Alfred K. Haywood, M.D., assistant superintendent Toronto General Hospital; Captain Bell, Winnipeg; Captain Brown; Captain Donaldson; Capts. John B. Fraser, Louis G. McKibbon, Thomas H. McKillip, Queen, Stone.——Capt. Francis A. C. Scrimger, M.D., Montreal, has been decorated with the Victoria Cross for valor on the field.——Of the 133 medical students who took the recent examination of the Ontario Medical Council, seventy-five have volunteered for overseas service. Thirty-six of them already had commissions, but had to take their final examinations before going to the firing line.——Maj. Thomas A. Stakey, Montreal, professor of hygiene in McGill University, has organized a sanitary section of the Canadian army medical corps. The equipment will be provided by the Canadian government.——Dr. Reginald de Lothbinere Harwood, Edmonton, Alberta, has been given command of the Fifty-First Battalion, C. E. F.——Capt. Robert J. Gardiner, Kingston, Ontario, has been appointed director of medical services of No. 6 divisional area.

GENERAL

New Officers for Medical Milk Commissions.—At the annual meeting of the American Association of Medical Milk Commissions held in Berkeley, Calif., June 18, Dr. John J. Thomas, Cleveland, was elected president; Dr. Otto P. Geier, Cincinnati, secretary; Dr. William J. Graf, Cincinnati, assistant secretary, and Dr. Julius P. Sedgwick, Minneapolis, treasurer.

Warning Against Typhoid.—The United States Public Health Service has issued a warning to the 400,000 government employees in the United States that they should be vaccinated against typhoid fever during the summer months. The bulletin states that seventy-five government employees die each year from the disease. The Secretary of the Treasury has established 164 stations where antityphoid inoculation may be obtained without expense.

Judges Appointed.—In an effort to popularize the social hygiene problem the American Social Hygiene Association several months ago announced the offer of a prize of $1,000 by the Metropolitan Life Insurance Company for the best original pamphlet on social hygiene for adolescents between the ages of 12 and 16 years. The following have been selected as judges in the contest, as recently given out: Mrs. Martha P. Falconer, Lee K. Frankel, Ph.D., Dr. Luther H. Gulick, New York; Miss Julia C. Lathrop, Dr. Milton J. Rosenau, Boston; Dr. Victor C. Vaughan, Ann Arbor, Mich., and Mrs. Ella Flagg Young, Chicago.

Session of Tropical Medicine Men.—The twelfth annual meeting of the American Society of Tropical Medicine was held in San Francisco, June 14 to 16 under the presidency of Capt. Charles F. Craig, M. C., U. S. Army. The society was presented with a bronze medal by Exposition Commissioner Charles A. Vogelsang, and the emblem was accepted on behalf of the society by Dr. John M. Swan, Rochester, N. Y., its secretary. It was decided to hold the next annual session at Washington, D. C., and the following officers were elected: president, Dr. Milton J. Rosenau, Boston; vice-presidents, Maj. Bailey K. Ashford, M. C., U. S. Army, San Juan, P. R., and Charles C. Bass, New Orleans; secretary-treasurer, Dr. John M. Swan, Rochester, N. Y., and assistant secretary, Dr. Allen J. Smith, Philadelphia.

The Fourth of July and Americanization.—A movement has been started to make the Fourth of July Americanization day for the thirteen million immigrants in the United States. Frederic C. Howe, commissioner of immigration at the port of New York, has addressed a letter to the mayors of American cities inviting them to participate and a plan has been worked out for the appropriate celebration of the day. Already many cities have accepted the invitation, and the Fourth of July, instead of being a day given up to meaningless noise, will have a new import for our new citizens in the making. The meeting in Philadelphia May 10 of the 5,000 newly naturalized citizens who listened to President Wilson's memorable address was perhaps the occasion which inspired the idea of making the movement for Americanization day general throughout the country.

Foes of Tuberculosis Meet.—At the annual meeting of the National Association for the Study and Prevention of Tuberculosis held in Seattle, June 16 to 18, Dr. John M. Glenn, New York City; W. H. Baldwin, Washington, D. C.; Dr. Edward R. Baldwin, Saranac Lake, N. Y., and Miss Maud Van Syckle, Detroit, were elected directors and the directors in turn elected the following officers: president, Dr. Theodore B. Sachs, Chicago; vice-presidents, Drs. Edward R. Baldwin,

Saranac Lake, N. Y., and Christen Quevli, Tacoma, Wash.; secretary, Dr. Henry Barton Jacobs, Baltimore; treasurer, Mr. William H. Baldwin, Washington, D. C., and executive committee, Drs. David R. Lyman, New Haven, Conn.; Orville W. McMichael, Chicago, and William C. White, Pittsburgh, and Messrs. William H. Baldwin, Washington, D. C.; Homer Folks, New York City, and Seymour Stone, Boston.

FOREIGN

Yellow Fever.—Under date of June 22, a press dispatch announced that yellow fever had appeared in Vera Cruz. Three cases had been reported.

Medical Missions Combine Work.—The Southern Methodists and Northern Baptists have united their medical work in Hu Chow, China, where the Methodists already have a hospital. This consolidation will increase the medical staff of the hospital and its equipment.

Postponement of Scandinavian Surgical Congress.—The Swedish, Danish, Norwegian and Finnish members of the board of the Surgical Association of the Northland have agreed to postpone *sine die* the annual meeting which was to have been held at Göteborg, Sweden, next month.

Postponement of International Conference on Cancer.—The *Hospitalstidende* states that the committee on cancer of the Danish Medical Association has decided to postpone till further notice the fourth international cancer conference, which was scheduled for 1916 at Copenhagen.

Illness of the King of Greece.—On the first week in June Kraus and Bier of Berlin and von Eiselsberg of Vienna were summoned to Athens to confer on the case of the King of Greece. According to cable reports, he was successfully operated on for empyema, and is now well on the way to recovery.

War Hospital Burned.—A telegram from El Paso, June 22, states that former Huertistas entered Chihuahua City, June 21, and set fire to the Tivoly Hotel, which was being used by General Velia as his base hospital. The report says that although 200 were rescued, more than 300 wounded were burned to death.

Deaths in the Profession Abroad.—G. Henricius, professor of diseases of women and children at the University of Helsingfors and president of the Cancer Research Society of Finland. He has published many works on obstetrics and the history of medicine in Finland, issuing them in German. ——F. Scordo, instructor in medical pathology at the University of Messina. He never recovered from injuries received in the Messina earthquake.

Union Medical College Purchased.—The China Medical Board of the Rockefeller Foundation announced on June 15 the purchase of the University Medical College at Pekin for $200,000. The college, which is the largest hospital and medical institution in China, has been owned by the London Missionary Society and supported jointly by six missionary organizations.——A commission will sail for China early in August to study the present medical conditions in that country and make investigation with especial reference to guide the future action of the board in China.

Famine Conditions in Mexico.—Reports to the American Red Cross from Nuevo Laredo show that practically no crops have been planted in that district and that the only source of supply of food for the coming year is the United States.——The corn supply in San Luis Potosi is scanty. The available supply of beans is not plenty and the new crop of wheat is scanty and difficult to obtain.——The director of the Pacific division of the American Red Cross has been sent to Mexico City personally to direct the relief operations of the American Red Cross in Southern Mexico. ——Arrangements are being perfected for the care of refugees who have just been brought from Galveston to Vera Cruz on the U. S. A. transport *Buford*.——Consul General Hanna, Monterey, advises under date of June 16 that 12,000 Mexican noncombatants were being fed by the council with corn supplied from the American Red Cross and that 15,000 will be under their care by the end of the week.——Gen. C. A. Devol, general manager of the American Red Cross, advises that he has arranged to supply Saltillo and Sabinas with rations of corn and beans.

WAR NOTES

Money for Italian Red Cross.—The Italian committee in Philadelphia, which is raising funds for the Italian Red Cross, announced on June 16 that $2,000 had already been secured for this purpose.

Red Cross Ambulances Burned.—In a fire which destroyed the extensive motor works at Park Royal, London, and which caused a damage of $500,000, 100 Red Cross motor ambulances ready for delivery were destroyed.

Castle Hospital Burned.—Dunrobin Castle, the Highland residence of the Duke of Sutherland, which has been utilized as a military hospital, was partially destroyed by fire, June 13. All the wounded soldiers and many of the pictures and other valuables were removed in safety.

Protests Seizure of Red Cross Equipment.—The Belgian minister to the United States has protested to the State Department in the name of his government and the International Red Cross against the seizure by the Germans of Belgian Red Cross funds and equipment.

New Field Hospital for War Zone.—A party of thirty-four surgeons and seventy-five nurses sailed for England for service in British field hospitals, June 22. The party is made up of physicians from the Harvard Medical School. Dr. Edward H. Nichols, Boston, is in command of the party.

American Red Cross in Italy.—The *Policlinico* of May 30 states that the Red Cross expedition, arriving at Genoa from New York on the *Caconic*, had intended to go to Budapest. As they found Italy in a state of war, they decided to place their services at the disposal of Italy and give up their plan of going to Hungary.

Auto Trucks for Red Cross.—The American Red Cross shipped on the steamship *Ioannina*, which sailed for the Piraeus, June 8, ten automobile trucks for the use of the American Red Cross Sanitary Commission in Serbia.——On the same ship eighty-nine tents and forty-two cases of hospital supplies and clothing for the Serbian Red Cross and American Red Cross hospital units in Belgrade were shipped.

New Hospitals in Italy.—The new civic hospital at Milan has just been inaugurated. Half of the expense of construction was subscribed by private individuals. It is built in scattered pavilions connected by covered corridors. The total expense is said to be about a million lire, that is, $200,000.——Bergamo's new hospital has also been inaugurated recently. The funds for this came from a legacy.——A large number of emergency hospitals have been prepared at various points in readiness for the war. At Rome the sick with chronic diseases who are able to be moved have been sent to outlying hospitals to leave room for wounded soldiers.

Typhus in Serbia.—Dr. R. Kirby-Smith of Tennessee, who has been in the typhus district in Serbia in the service of the American Red Cross, returned June 16. He reported the disease practically under control at Belgrade where he went to relieve Dr. Ryan, the American physician in charge of the hospitals in Belgrade, who was attacked by typhus. Dr. Kirby-Smith said he found Serbia one great hospital and thousands of the natives had died. In the main hospital at Belgrade there were 1,500 patients with four doctors to take care of them. The deaths in the hospital were from thirty-five to forty a day. Eventually the sanitary methods adopted by the Americans assisted by the available local forces began to show results and the epidemic began to abate.

Branch of the British Medical Association in Northern France.—A branch of the British Medical Association has been organized among the physicians with the army in France. It has been holding fortnightly meetings at Rouen for the last five or six months. The surgeons attached to the various hospitals at Rouen have also combined for concerted action. The council thus formed advises from time to time what line of treatment should be followed with different classes of injuries, and all the members of the council adopt it at once. By this means the method of treatment gets a fair and extensive trial, and a conclusive judgment can soon be passed on it. The *British Medical Journal* relates further that it is proposed to issue a leaflet for wide distribution when important experience has been accumulated on a given subject.

Defense of Italy Against Epidemics.—Our Italian exchanges state that the interior department organized last October measures for training in prophylaxis of epidemic diseases, and practical courses and exercises have been given in bacteriology at the central headquarters of the national public health service. Groups of the directors and assistants of the various local boards of health have been summoned in turn, and given a course in the latest bacteriologic technic. Practical courses on the prophylaxis of infectious diseases have been given to physicians at the various university centers, and are being continued. Courses to give an outline of the

technic of disinfection and official sterilization have been held in all the institutes for hygiene throughout the country and at numerous other points. These repeated courses are free and are open to all who wish to learn the fundamental principles for the defense against contagious diseases, but the course is designed especially for all connected with local boards of health, nurses and others. These courses have been vigorously carried on with practical instruction at twenty-four different cities, so they are accessible to all. Courses for training in first-aid work have also been given by private lecturers.

Aid for Belgian Physicians.—The report of the treasurer of the committee of American physicians for the aid of the Belgian profession for the week ended June 26, 1915, lists the following contributions:

Dr. Emery R. Hayhurst, Columbus, Ohio	$ 5.00
Benton County Medical Society, Rogers, Ark.	5.00
Receipts for the week ending June 26	$ 10.00
Previously reported receipts	7,447.00
Total receipts	$7,457.00

PREVIOUSLY REPORTED DISBURSEMENTS

1,625 standard boxes of food at $2.20	$3,575.00
1,274 standard boxes of food at $2.30	2,930.20
353 standard boxes of food at $2.28	804.84
Total disbursements	$7,310.04
Balance	$ 146.96

F. F. SIMPSON, M.D., Treasurer,
5 Jenkins Arcade Building, Pittsburgh.

Report on War Relief.—A report of the work of the War Relief Commission of the Rockefeller Foundation has recently been made. The commission sailed for Europe in November, 1914. It was soon found that it was too early for rehabilitation of the noncombatants, the worst sufferers, in the war region, and that the first work was to provide relief for starving and disease-swept nations. In Belgium the commission cooperated with other agencies and provided five full cargoes of supplies for Belgian relief at an expenditure of $1,000,000. A station was organized in Rotterdam for the sorting and distribution of the large quantities of clothing received. The Belgian refugee women in Holland were organized into sewing camps for which raw material and sewing machines were furnished in order to provide useful employment for the idle and underclothing for those who needed it. This work has been discontinued during June. About $90,000 was spent in this work. The sum of $20,000 a year has been provided for the benefit of scientific professors of Belgian universities working in laboratories in England. In northern France at first efforts were confined to the relief of distress in a few communities where it was most needed, and later was organized a comprehensive plan for the relief of the whole territory of northern France occupied by the German army. Dr. Alexis Carrel of the Rockefeller Institute was placed by the French government in charge of a military hospital near the firing line at Compiègne, and in order that the work of the hospital might be made of value to science the foundation provided apparatus and technicians to assist in research in bacteriology, chemistry and surgery as it developed in the hospital. In Serbia, after the visit of James and Bicknell of the War Relief Commission, by invitation of the Serbian government and in cooperation with the American Red Cross, the American Sanitary Commission, under the leadership of Dr. Richard P. Strong of Harvard, was established in Serbia, having in view chiefly the relief of the terrible typhus situation. After three months' work of this commission typhus has been checked in regions where it has been possible to institute sanitary measures. About $125,000 has been spent, of which the foundation furnished about $85,000, the rest having been supplied by other contributors to the Red Cross. In Poland a relief commission was established under the leadership of the American ambassador in Berlin, under a grant of $10,000 a month from the foundation. The German government then agreed to contribute $500,000 a month for the purchase of food and to stop all requisitions of food in Poland as soon as relief work began. Efforts to obtain grain from countries outside of Poland were unavailing. The German government has recently advised the commission that since its inventory of food supplies has been completed it will be able to take care of that part of Poland under its control. Similar proposals on the part of Austria followed the initiation of relief measures in southern Poland and Galicia. Only Turkey and Italy have not been investigated by the commission, but a representative will be sent to Turkey soon. The commission finds that the more highly organized communities are themselves finding it possible to alleviate the acute distress, and countries like Belgium are now able to help themselves to a degree impossible six months ago, though they are still dependent on outside food supplies. Russian Poland, Serbia and Montenegro, in the latter two of which typhus still rages, will be in need of relief for some time. The War Relief Commission has established headquarters in Switzerland and will be able to keep track of the requirements of the various war areas.

LONDON LETTER

LONDON, June 11, 1915.

The War

RISE IN INFANT MORTALITY AS A CONSEQUENCE OF THE WAR

The colossal war in which we are engaged affects the national life in many ways. One of the most important results is the effect on infant life, which is twofold. The birth rate is diminished, as shown by the figures for London in which the number of births every week is between 400 and 500 below the average in the corresponding weeks of the past five years, allowing for the growth of population. There is also an increase of infant mortality. Children have been dying in London at the rate of 200 a week for the past thirteen weeks in excess of the number dying during the corresponding weeks of last year. The returns for ninety-five other great towns in England and Wales showed that the increased mortality among children is general. Much of this is indirectly traceable to the war. In March there was a virulent outbreak of measles which has not yet run its course. This is a disease of the earlier years of childhood, but it is rare, though not unknown, in infants under 6 months old, and mortality is more common among babies of that age. A more probable cause is that infants are getting less care for reasons arising out of the war. There are fewer doctors and nurses in civil life, and they are very much overworked. Probably a more important cause is the increase in the industrial employment of married women, which is due to the shortage of male labor, produced by the creation of the new armies, and the lack of agencies for looking after young children during the absence of the mothers from home. Day nurseries have always been fewer in this country than in France in proportion to the population. Their number in London is now more inadequate than ever.

Mr. Long, president of the Local Government Board, received a deputation from the Women's Cooperative Guild, which urged the passing of immediate legislation dealing with the care of maternity and infancy. It was urged that the notification of births act should be made universal; that the powers of county councils should be extended so as to cover the establishment of maternity centers and maternity hospitals, and that sanitary authorities should have legal powers to provide antenatal advice and treatment, and carry on preventive health work among children. Mr. Long, in a sympathetic reply, said that anything that could be done to protect infant life ought to be done. At this moment of supreme national trial, the preservation of infant life and the lives of our women was of increased importance. In the few months that had passed since August, the population of a great town had been removed from among us—the best, the bravest, and the finest of our manhood. He would be glad, indeed, to introduce legislation making the notification of births act compulsory all over the country.

THE SHORTAGE OF PHYSICIANS

The great draft made on the profession for the supply of surgeons to the new armies has created a difficult problem in civil practice. Already the professional reserves have been drawn on to the full, and the question arises whether it may be possible by a rearrangement of work to meet the demands and to secure a certain margin of safety. The question is difficult because men carrying on practices have a vested interest which, indeed, represents their working capital. A practice is largely a personal matter, and its value always tends to deteriorate in the hands of any one other than the man who built it up. All methods of dividing up private medical work inflict injury on the doctors who are thereby set free. This consideration is important, for it is to the general practitioners of the country that we must look for further help. In districts of the poorer class the doctors are already fully occupied, and no rearrangement is possible

or desirable; but in the suburban areas of large towns a different state prevails. Here there are to be found young men with comparatively small practices who are engaged in the work of "building up." That is to say, they are investing time and sometimes money in districts in which they hope to be able to establish a large connection. Many of these physicians are serving the state by attending the wives and families of soldiers, by hospital work, or in some other capacity; but organized effort in these districts would probably set free a considerable number. Medical work might be centered in the hands of a few selected physicians whose whole energies would be required. In this way, loss of time which at present the nation cannot afford would be obviated. It would of course be necessary to insure that, at the end of the war, those who had been dispossessed should receive compensation, and this would not be an easy matter.

PARIS LETTER

Paris, June 10, 1915.

The War

USEFULNESS OF ROENTGENOSCOPY IN WAR EVEN FOR NONSURGICAL CONDITIONS

At one of the recent sessions of the Réunion médicale de la VI-e armée, Dr. H. Grenet called attention to the utility of Roentgen-ray examinations methodically employed near the army zone. The hospitals in this zone are constantly receiving emaciated patients who have lost their appetite and are often a little feverish, coughing and presenting an appearance suggesting tuberculosis. The question is whether the condition is really tuberculosis or merely one of exhaustion or light but somewhat protracted bronchitis. When the stethoscopic signs are uncertain or lacking and the bacteriologic examination of sputum is negative, it would be necessary, in order to establish the diagnosis by the usual clinical measures, to submit these numerous patients to a lengthier period of observation which would seriously encumber the hospitals. Rapid diagnosis is possible in these cases by means of roentgenoscopy. If, on the screen, the patients present an obscure apex or a mediastinal adenopathy in the course of evolution, they are either immediately removed to the interior of the country, where they are given a long leave of absence for convalescence, or else discharged. If, on the other hand, they present a normal roentgenoscopic picture, they are kept and after a course of rest and good food they are able to return to their corps. This mode of procedure also diminishes the risks of the spread of infection, since the tuberculous patients only pass through the hospital without undergoing any prolonged contact with the other patients.

TREATMENT OF WOUNDS WHICH COMMUNICATE WITH THE RECTUM OR THE URETHRA

The treatment of these wounds was the subject of an interesting discussion at the Société de chirurgie. Dr. Cadenat of Paris laid down the rule that in the presence of a wound communicating freely with the urethra or the rectum, the first condition for obtaining cicatrization is to permit the urine and fecal matter to be discharged without contact with the wound. He has seen death occur in the case of a patient who for more than a month had discharged all dejecta by a large sacral fistula. On the other hand, in two cases he had occasion in the first few days after the wound to make an iliac anus and an opening for the discharge of urine (suprapubic cystostomy) respectively in men whose wounds formed a perfect cloaca; the wounds became completely transformed and cicatrized without complication. Professor Quénu does not agree with Dr. Cadenat with regard to treatment of wounds of the rectum. He has observed three. In none of them has he made use of colostomy. The essential thing is to open up along the path of the projectile. Dr. Morestin, agrégé and surgeon of the hospitals of Paris, also prefers to lay open the region of the wound and to drain it directly, at least as the first measure adopted. The predominant feature in the four cases of wound of the rectum that he has had occasion to treat was serious infection of the cellular tissue of the pelvis. It was necessary only to incise freely, to drain and to disinfect. Of the four patients only one succumbed. Two others recovered completely under treatment by deep and extensive incisions. The fourth is still under treatment. Dr. Hartmann, professor of clinical surgery at the Faculté de médecine de Paris, has, since the beginning of the war, treated four cases of projectile wound of the rectum. In none of them has he performed a colostomy. He has merely opened up the wound freely and instituted drainage. Two of the patients died, one of secondary hemorrhage and one of embolism. In the two other cases he has seen the large rectal fistula close up and become healed very rapidly after resection of the sacrum and removal of a fragment of shell.

Measures Against Alcoholism

The Syndicat des travailleurs municipaux (section of asylums and hospitals of the department of the Seine) has just addressed to all the senators a petition that the senate pass the law limiting the number of places for the sale of drinks. There are in France, according to this letter, 483,000 declared drinking places (it is impossible to say how many clandestine ones) which amounts to one for every eighty inhabitants. These are disheartening figures. There is one liquor shop for every 246 Germans, one for every 380 Americans, one for every 430 English and one for each 3,000 Swedes. Paris has 33,300 liquor shops for 2,601,000 inhabitants. London has only 5,860 bars for 4,536,000 inhabitants, and New York has 10,821 saloons for 3,437,000 inhabitants.

Award of the Osiris Prize

The five academies which constitute the Institut de France have just held a secret session for the award of the Osiris prize. It was awarded, as recommended by the committee of award (The Journal, June 5, 1915, p. 1928), that is, half of it (50,000 francs or $10,000) to Drs. Chantemesse and Fernand Widal, professors at the Faculté de médecine de Paris, and the other half to Dr. Vincent, professor at the Ecole de médecine et de pharmacie militaires du Val-de-Grâce, for their work on antityphoid vaccination. When the reading of the report was finished, a discussion took place which lasted for almost an hour and a half. In order to enlighten their colleagues who are not informed on this side of the question, some members of the section of medicine spoke on the rôle of each in the discovery of the application of antityphoid vaccination. One member then proposed to have a part of the prize awarded to Wright, who in the Transvaal was the first to vaccinate troops in campaign against typhoid fever. The reader of the report explained that this proposition was against the intentions of the testator, who specified in his will that the prize should be reserved exclusively for Frenchmen.

A member of the Academie des sciences then remarked that the academy would prepare to award to Wright one of its highest recompenses for his admirable work on antityphoid vaccination. The senate then voted, seventy-three votes against six and two blank ballots to share the prize as previously explained. It was also decided that 60,000 francs ($12,000) out of the arrears of the last Osiris prize, which was not awarded three years ago, should be devoted to the military preparations patronized by the Institut de France.

BERLIN LETTER

Berlin, June 1, 1915.

Personal

DEATH OF PROFESSOR SONNENBURG

The surgeon in chief since 1890 of the Moabit public hospital, at Berlin, Professor Sonnenburg, died suddenly of heart disease, May 25, aged 66. He studied under Lücke and in 1880 became assistant to Langenbeck at Berlin and later on to his successor, von Bergmann. He received his degree at Strassburg in 1876, and was appointed professor extraordinary at Berlin in 1883. He contributed many articles and monographs to the "Manual of Practical Surgery," to the *Deutsche Zeitschrift für Chirurgie* and various compilations. He became best known by his clinical work and his publications on the pathology and therapy of appendicitis. Sonnenburg was a man of distinguished appearance, and was popular in the profession at home and abroad with his students and also with patients. His efforts contributed most to the founding and development of the International Surgical Congress, and he was deeply concerned in regard to consequences for science of the war. He had been prevented from taking any active part in the war by an attack of kidney-stone colic just as he had been summoned to serve as a generalarzt in the field. The attack wrought such damage that he never recovered from it, and died from the indirect consequences.

The War

WORK OF DENTISTS IN THE FIELD

Dentists were supplied to the German military hospitals from the beginning of the war, and their work was found so

useful that it was deemed wise to increase their number and call on the students of dentistry to practice dental work and summon them from the troops among whom they had been distributed. Besides this, the physicians were given a corresponding number of technicians skilled in making dental prostheses. This is the main part of the work on the firing line, as there are so many wounds of the jaws; but in the set camps and occupied towns, the care of the teeth and mouth is predominant. More frequently than in peace the officers and men break their artificial teeth. The constant moving about, the lack of any safe place to keep them and the demands on the teeth from the coarser food render repairs frequent and necessary. At first there was a deficiency in materials for artificial teeth; this was remedied to a slight extent by the supplies found in the dental offices in the enemy's country. Conditions are better now. On certain days some of the dentists from the base hospitals go to the front to undertake the necessary dental operations on the different bodies of troops. The drill and the set of instruments are carried on a motor truck and with the expert prosthesis maker, the dentist tours away. He generally has to cover from 12 to 20 kilometers before he reaches the part of the troop to which he has been directed.

WELFARE WORK IN BELGIUM

The German government of the part of Belgium occupied by our troops does not restrict its efforts to collecting taxes, bringing order into affairs, building up destroyed places and starting trade and industry to work again, but it is also engaged in applying to circumstances in Belgium, the social welfare work which in peace has realized such successes among our enemies. The difficulties of this work are not trifling as the populace, not only from lack of understanding but also from resistance to the benefits imposed on them, rebel against the introduction of these welfare measures. Already under way under the auspices of the Red Cross are arrangements to provide work for the unemployed, to combat tuberculosis and venereal diseases and welfare work for children. To disseminate knowledge on these subjects a periodical has been founded by Professor Pannwitz at the head of the organization. The periodical is called *Das belgische Rote Kreuz*. The welfare work for children is the youngest branch of this work. To aid in starting the various branches of the work, von Behr-Pinnow and Professor Langstein, the curator and director, respectively, of the Kaiserin Auguste Viktoria institution, the central headquarters for infant welfare work in Germany, were summoned to Brussels to discuss ways and means. There is much to be done. The death rate among infants in Belgium is comparatively low, averaging 14 per cent. But the number of stillborn is large. Besides this, the statistics in Belgium are not reliable because they are not compiled with sufficient accuracy. The central welfare station (*dispensaire social*) of the Belgian Red Cross has already installed a number of visiting nurses or welfare workers who sought out in more than 200 families the children requiring special measures; but unfortunately, the same difficulty was experienced here as in the other branches of the Belgian Red Cross: the Comité d'hygiène refuses to carry on its work because the comité directeur had been dismissed for political reasons. It is therefore impossible for the present to work in common with the Belgian institutions of the kind. According to Professor Langstein, attendance at Belgian infant consultations and *cantines maternelles* has increased considerably. Up to the present time only 2 per cent. of the Belgian infants are under charge of the welfare workers, a very low proportion in consideration with the 15 per cent. in Germany. In the mothers' cantines the nursing mothers are given an abundant midday meal, an arrangement similar to that in France and Germany. In Charlottenburg, for example, similar provisions are made for adequate nourishment of pregnant women before delivery. Professor Langstein obtained a very favorable impression of a day nursery at Antwerp. It had accommodations for from forty to fifty children, and there were six attendants. The mother pays only 5 centimes a day for her child. The rest is provided by benefactors whose names are inscribed over the different beds. In the day nursery there is also a school for girls of 14 or 15 to train them in the care of infants. There are no professionally trained infant nurses or welfare workers in Belgium as yet. The women who do such work do it from philanthropy. There do not seem to be any training schools for nurses in Belgium. There are also in this field rich opportunities for German uplift work (*für deutsche Kulturarbeit ein reiches Feld*).

Deaths

Alfred Mitchell, M.D. College of Physicians and Surgeons in the City of New York, 1865; a Fellow of the American Medical Association and president of the Maine Medical Association in 1892 and 1893; assistant surgeon of the Ninth Maine Volunteer Infantry during the Civil War; lecturer in pathology and successively professor of therapeutics, obstetrics, pediatrics, gynecology, practice of medicine and internal medicine and secretary and dean of the faculty of the Medical School of Maine, Brunswick; and since 1911 emeritus professor of internal medicine; who was given the degree of LL.D. by Bowdoin College in 1907; a member of the consulting staff of the Maine General Hospital and of the Central Maine General Hospital and a member of the board of overseers of Bowdoin College; died at his home in Brunswick, June 13, aged 78.

Francis Oswald Dorsey, M.D. College of Physicians and Surgeons in the City of New York, 1896; a Fellow of the American Medical Association; associate professor of medicine in the Indiana University School of Medicine, Indianapolis; consulting and attending physician at the Indianapolis City Hospital for fifteen years; assistant professor of the principles and practice of medicine in the Indiana Medical College from 1889 to 1900 and assistant demonstrator in pathology from 1900 to 1907; for four years consulting physician to the Indianapolis Dispensary and clinician to the Bobbs Free Dispensary; died in the Methodist Hospital, Indianapolis, June 17, nine days after a surgical operation, aged 45.

Robert William Long, M.D. Jefferson Medical College, 1866; Bellevue Hospital Medical College, 1869; for forty years a resident of Indianapolis and for the last twenty-five years interested largely in real estate; a veteran of the Civil War; who with his wife had donated $245,000 for the establishment of the Robert W. Long Hospital intended as a teaching hospital for the Indiana University School of Medicine; died at his home in Indianapolis, June 18, from disease of the liver, aged 71.

Charles A. Cooperrider, M.D. Medical College of Ohio, Cincinnati, 1890; a Fellow of the American Medical Association and American Academy of Medicine; for several years professor of physical diagnosis in the Ohio Medical University, Columbus, and professor of diseases of children for several years at Starling-Ohio Medical College, Columbus; a member of the medical staff of the Protestant Hospital; died in his office in Columbus, Ohio, June 15, from cerebral hemorrhage, aged 53.

Henry Gray, M.D. College of Physicians and Surgeons in the City of New York, 1867; a major in the Federal Service during the Civil War; for forty-five years a member of the Greenwich (N. Y.) Board of Education; once president of the Greenwich and Johnsonville Railroad; president of the Greenwich Union Waterworks Company since its organization, and president of the Consolidated Electric Company; died at his home in Greenwich, N. Y., June 20, aged 73.

John W. Coleman, M.D. Miami Medical College, Cincinnati, 1856; Medical College of Ohio, Cincinnati, 1858; assistant surgeon of the Forty-First Illinois Volunteer Infantry throughout the Civil War; for more than half a century a practitioner of Monticello, Ill., and first superintendent of schools of Piatt County; died at his home in Decatur, Ill., June 8, aged 84.

William L. Breyfogle, M.D. Hahnemann Medical College, Philadelphia, 1868; formerly a practitioner of New Albany, Ind., and later one of the builders and president of the Louisville, New Albany and Chicago Railway, now the Monon Route, and later a director in the New Albany Banking Company; died at his home in San Mateo, Cal., June 15, from pneumonia, aged 66.

Edward E. Hazlett, M.D. University of Pennsylvania, 1880; of Abilene, Kan.; a Fellow of the American Medical Association and a specialist on diseases of the eye, ear, nose and throat; while returning from Annapolis, Md., where he had just witnessed the graduating exercises of his son from the Naval Academy; died suddenly on a train at Brookfield, Mo., June 17, aged 63.

John Tillman Lamkin Boyd, M.D. Tulane University, New Orleans, 1909; formerly a Fellow of the American Medical Association; a member of the Mississippi State Medical Association; local surgeon for the Illinois Central Railroad at Summit, Miss., and president of the local board of health;

died at his home in Summit, June 11, from cerebral hemorrhage, aged 33.

Albert S. Core, M.D. Rush Medical College, 1879; a Fellow of the American Medical Association and a specialist on diseases of the eye, ear, nose and throat; formerly of Du Quoin, Ill., and Chicago, but for the last seven weeks a practitioner of Mendota, Ill.; died in his office in that city, June 16, from cerebral hemorrhage, aged 65.

Frank Fithian, M.D. University of Pennsylvania, Philadelphia, 1884; a Fellow of the American Medical Association; of Paris, Ky.; for many years a member of the local school board; a member of the staff of the Massie Memorial Hospital; died in the Christian R. Holmes Hospital, Cincinnati, June 12, from pneumonia, aged 55.

Harold W. Blackburn, M.D. University of Texas, Galveston, 1896; of Normanna, Texas; aged 45; who had been under treatment in a hospital in Beeville, Texas, for several weeks, died at his home, June 17, from the effects of a gunshot wound of the head, believed to have been self-inflicted, with suicidal intent.

Reuben Willis Bower, M.D. Northwestern University Medical School, 1870; a member of the Illinois State Medical Society; a veteran of the Civil War, in which he served in the hospital corps; for more than forty years a practitioner of Sheridan, Ill.; died at his home, June 10, from cerebral hemorrhage, aged 76.

John Wesley Nickson, M.D. University of the South, Sewanee, Tenn., 1907; formerly a Fellow of the American Medical Association; a member of the Oklahoma State Medical Association; a physician and druggist of Loco, Okla.; aged 34; was drowned recently while attempting to cross a flooded creek.

George P. Hall, M.D. University of Louisville, 1877; Jefferson Medical College, 1878; a Fellow of the American Medical Association and one of the most prominent specialists on diseases of the eye, ear, nose and throat of the state; died at his home in Houston, Texas, June 9, aged 58.

James Edwin Cleaves, M.D. Harvard Medical School, 1879; a Fellow of the American Medical Association; aged 62; died at his home in Medford, Mass., June 20, from an incised wound of the heart, self-inflicted it is believed with suicidal intent, while suffering from melancholia.

Henry Mazyck Clarkson, M.D. University of Pennsylvania, Philadelphia, 1859; a member of the Medical Society of Virginia; surgeon in the Confederate Service during the Civil War; a well-known poet of the South; died at his home in Haymarket, Va., June 17, aged 78.

William Clinton Gibson, M.D. Jefferson Medical College, 1881; Missouri Medical College, St. Louis, 1891; a member of the Washington State Medical Association; for twenty-five years a practitioner of Seattle; died at his home in Port Angeles, Wash., June 8, aged 52.

Frank Havens Russell, M.D. University of Maryland, Baltimore, 1893; a Fellow of the American Medical Association; for several years a member of the Board of Health of Wilmington, N. C.; died at his home in that city, June 4, from cerebral disease, aged 43.

John Mason Hastings, M.D. Harvard Medical School, 1895; a member of the Massachusetts Medical Society; a practitioner of Dorchester, Boston; assistant gynecologist to the Carney Hospital, Boston; died at his summer home in Provincetown, Mass., June 11.

Joseph John Dallal, M.D. John A. Creighton Medical College, Omaha, 1901; a Fellow of the American Medical Association; a native of Syria and for several years a practitioner of Kansas, and coroner of Decatur County; died at his home in Omaha, June 13, aged 46.

Joel Hamlet Barham, M.D. University of Louisville, Ky., 1876; Tulane University, New Orleans, 1880; a Fellow of the American Medical Association and a practitioner of Nacogdoches County, Texas; died at his home in Nacogdoches, June 11, aged 68.

James Dermot Hayes, M.D. New York University, New York City, 1894; a member of the Connecticut State Medical Society; for nearly twenty years a practitioner of Torrington, Conn.; died in Dr. Peck's Sanitarium, Woodmont, Conn., June 14, aged 45.

Leon Leigh Friedrich, M.D. George Washington University, Washington, D. C., 1881; formerly resident physician at the Providence Hospital and assistant at the Central Dispensary, Washington; died at his home in that city, June 16, aged 57.

W. C. Cosby, M.D. University of Tennessee, Nashville, 1893; formerly a member of the Kentucky State Medical Association; a physician and druggist of Slaughterville, Ky.; died June 15, from cerebral hemorrhage, aged 50.

William C. Johnson, M.D. College of Physicians and Surgeons, Baltimore, 1887; a physician and druggist of Coleman, Fla.; was shot and killed by his son, June 6, aged 52.

Marriages

HUNTER W. SCARLETT, M.D., American Ambulance Hospital, Paris, France, to Miss Edith Townsend of Bryn Mawr, Pa., in Paris, June 10.

MELVILLE BENDHEIM FISCHER, M.D., Washington, D.C., to Miss Marguerite Greenhut of Escanaba, Mich., in Washington, June 22.

EDWARD DEWITT LEONARD, M.D., Boston and Newton, Mass., to Miss Grace Kyle Richardson of Newton Center, Mass., June 15.

THOMAS LEONARD RICHARDSON, M.D., Baltimore, to Mrs. Ruby Thompson Moore of Monroe, N. C., at Charlotte, N. C., June 16.

JACOB CASPER HUTZELMAN, M.D., Crestvue, near Sharonville, Ohio, to Miss Marie D. Glassmeyer of Cincinnati, June 16.

JAMES ALEXANDER THOM, JR., M.D., Zachary, La., to Miss Virginia Hulsart of Big Rapids, Mich., in New Orleans, June 15.

ALEXANDER YELVERTON PEYTON GARNETT, M.D., Washington, D. C., to Miss Mildred Poor of Easthampton, L. I., N. Y., June 12.

ACHILLE MURAT WILLIS, M.D., Richmond Va., to Miss Emma Gold Hutcheson of Rockbridge Baths, Va., June 9.

W. REID PUTNAM, M.D., State Epileptic Colony, Va., to Miss Alice Aylett Callaway of Norwood, Va., June 3.

ELLIOTT HOLSWORTH HUTCHINS, M.D., Barstow, Md., to Miss Ernestine Stier Dulaney of Baltimore, June 15.

OSCAR GUSTAV NELSON, M.D., Huchow, China, to Miss Henrietta Sperry of East Nashville, Tenn., June 11.

BENJAMIN WALTER HAMILTON, M.D., to Miss Florence Sarles Durstine, both of New York City, June 9.

HOWARD CASPER MURRAY, M.D., to Miss Margaret Elizabeth Grosvenor, both of Herkimer, N. Y., June 15.

JOHN JAY MOORE, M.D., Soldiers' Home, Calif., to Miss Persis Hasselbach of Fremont, Ohio, June 17.

IRA ELMER HOFFMAN, M.D., Chicago, to Miss Florence Emilie Demaree of Madison, Ind., June 14.

FRANCIS PEYTON ROUS, M.D., to Miss Marion Eckford De Kay, both of New York City, June 15.

ERICH W. SCHWARTZE, M.D., New York City, to Miss Annie J. Andrews of San Antonio, Tex., June 5.

JOHN PUNNETT PETERS, M.D., to Miss Charlotte Morse Hodge, both of New York City, June 19.

HARRY MORTIMER RICHTER, M.D., to Miss Adelyn Ruth Windmuller, both of Chicago, June 23.

FERDINAND F. DOLLERT, M.D., Milwaukee, to Miss Jessie Baranowski of Oshkosh, Wis., June 8.

ROBERT EDWARD PLUNKETT, M.D., Whitehall, N. Y., to Miss Rose Wilson of Troy, N. Y., June 16.

FRANCIS A. MALONE, M.D., Waterford, Wis., to Miss Marie C. Scholl of Pewaukee, Wis., June 18.

JAY M. KOHNS, M.D., Honolulu, Hawaii, to Miss Lulu Urban of Louisiana, Mo., June 12.

JOHN WILLIAM GOGGIN, D.D.S., to Miss Margaret Helen Mann, both of Chicago, June 12.

LAZARUS KARP, M.D., to RACHEL L. LOVENSTEIN, M.D., both of Richmond, Va., June 2.

EVERETT BENSON WILLIAMS, M.D., to Miss Cecelia R. Daly, both of Chicago, May 3.

A. WILSON HALE, M.D., to Miss Elza Roe Atkinson, both of Nashville, Ark., June 17.

ARTHUR T. BETTS, M.D., Chicago, to Miss Florence Bras of Seattle, Wash., June 19.

SAMUEL T. LIPSITZ, M.D., to Miss Babette Kahn, both of St. Louis, June 15.

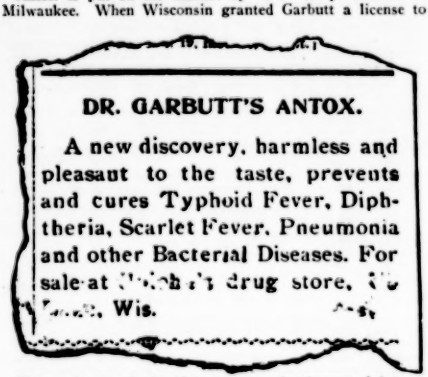
The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

ANTOX

"Dr." Garbutt's Panacea

Antox is put on the market by "Dr." W. J. Garbutt of Milwaukee. When Wisconsin granted Garbutt a license to


DR. GARBUTT'S ANTOX.
A new discovery, harmless and pleasant to the taste, prevents and cures Typhoid Fever, Diphtheria, Scarlet Fever, Pneumonia and other Bacterial Diseases. For sale at drug store,
Wis.

Photographic reproduction of a newspaper advertisement of Antox.

practice medicine in 1900, the claim seems to have been made that he was a licenciate of the Royal College of Surgeons, England. As the "Medical Register for 1915" of the British Isles did not show any such man to be a licenciate of the Royal College of Surgeons, a letter was written to the secretary of the Examining Board of the Royal College of Surgeons, bringing this fact to his attention. The secretary replied that there was no member of the Royal College of Surgeons of the name of W. J. Garbutt, and apparently no such person had ever presented himself for examination.

Garbutt seems to put his nostrum on the market in various ways. One of them is by traveling over the state with a concern calling itself the "Quaker Doctors," a medicine-vaudeville show. In this connection the following extracts from a letter received some time ago from a small town in northern Wisconsin are to the point:

"A couple of months ago a patent medicine concern calling themselves 'Quaker Doctors' rented the Opera House in this town and for two weeks ran a nightly vaudeville show—and between acts sold their medicine and other sundries such as tooth powder, toilet soap, etc.

"With each dollar purchase the purchaser received a ticket entitling holder to a free consultation by Dr. Garbutt who travels with the show and conducts a temporary office in town while show lasts. . . . Among other remedies that they sold was one they call 'Antox.'

"Between the vaudeville acts Dr. Garbutt would get on the stage, sit down sideways, and let the people see his honest and benevolent countenance. There he would sit silent while the manager with a bottle of Antox in hand would relate the great wonders that this remedy can accomplish; that it would cure every contagious disease if taken at onset; that Dr. Garbutt had spent 35 years of his life to perfect this his gift to humanity. At only one dollar a bottle. Those are the words he used. My wife was present and of course she believed it, and when shortly after my child became sick instead of calling for a doctor my wife insisted that I go to the drug store and buy a bottle of Antox, which I did, and after using it for a couple days and the child getting worse we sent for a doctor, but too late. That night my child passed away.

"I was told that you analyze stuff of that nature. I am sending you part of the medicine left and would like to hear your report on it and if it is a rank fraud, as I suspect it is, I may be able to get our editor to publish it in his paper.

"Enclosed you will also find marked copy of our paper with Antox ad. in it. I would send you an original bottle, but have been out of work lately and cannot afford to buy it."

In addition to the "traveling doctors'" method of bringing Antox before the public, Garbutt also seems to have had the impudence to present the stuff to physicians. As is usually done in such cases, Garbutt issues two sets of advertising, one for physicians and the other for the public. There is little to choose between them. To the public Garbutt presents:

"My Gift, Antox, To Humanity."
"The Most Important Discovery ever made in Preventive Medicine."
"Dr. Garbutt's Antox Prevents Scarlet Fever, Diphtheria, Pneumonia, Measles, Typhoid Fever, Cholera and other Bacterial Diseases."

To the medical profession Garbutt presents his nostrum under the following claims:

"An Anti-Toxic treatment for bacterial diseases."
"The most important advance in medicine since the discovery of Antiseptics."
"Antox gives immediate results in Pneumonia, Typhoid Fever, Diphtheria, Scarlet Fever, Measles, Diarrhea and Cholera Infantum, reduces pulse and temperature in a few hours, and promotes rapid convalescence."
"Antox is a scientific preparation of Chlorine, Sulphur and Ammonia."

The last statement quoted is, apparently, the only intimation that Garbutt gives of the composition of his "patent medicine." The nostrum was examined in the Association's laboratory.

CHEMISTS' REPORT

"Several bottles of 'Dr. Garbutt's Antox No. 1,' prepared by Dr. W. J. Garbutt, Milwaukee, Wis., were submitted to the Chemical Laboratory for examination. Each bottle contained about 120 c.c. of a red syrupy liquid, having a sharp odor and an acid reaction. The specific gravity of the liquid at 15.6 C. was 1.0603. Qualitative tests demonstrated the presence of ammonium, chlorid, sulphite (sulphur dioxid), sulphate and invert sugar. Quantitive examination yielded the following:

Ammonia (NH_3)	0.279	per cent.
Chlorid (Cl)	0.694	per cent.
Sulphur dioxid (SO_2)	0.263	per cent.
Sulphur trioxid (SO_3)	0.018	per cent.
Invert sugar	17.47	per cent.

My Gift To Humanity

DR. GARBUTT'S ANTOX

PREVENTS Scarlet Fever, Diphtheria, Pneumonia, Measles, Typhoid Fever, Cholera, and other Bacterial Diseases.

DIRECTIONS: Lose no time but the moment you notice indications of sickness in any member of the family; such as sore throat, headache, fever coated tongue, cough, cold, pain in the chest, hard breathing, redness and running of eyes, skin eruption, rapid pulse, high temperature, etc. give ANTOX until all these symptoms have disappeared.

DOSE

Half a teaspoonful every half hour for three or four days

Other members of the family should take a dose several times a day

PRICE ONE DOLLAR.

MANUFACTURED ONLY BY
DR. W. J GARBUTT
701 32d ST., MILWAUKEE, WIS.

Detach this part of Label.

DR. GARBUTT'S

ANTOX No. 1

For Physicians

Gives immediate results in Pneumonia, Typhoid Fever, Diphtheria, Scarlet Fever, Measles, Diarrhea and Cholera Infantum. Reduces pulse and temperature in a few hours, and promotes rapid convalescence.

DOSE:

Half a teaspoonful or more without water every half an hour. See formula and further hints on enclosed folder

PREPARED ONLY BY
Dr. W. J. Garbutt
701-32nd St.
Phone Kilb. 4542L - MILWAUKEE, WIS.

On the left: Label of Antox as it goes to the public. On the right: Label on Antox put up for physicians.

"Essentially each 100 c.c. of the solution contains approximately 0.92 gm. of ammonium chlorid, 0.12 gm. of hydrogen chlorid (equivalent to 1.2 c.c. of diluted hydrochloric acid, U. S. P.), 0.35 gm. hydrogen sulphite (equivalent to 6 c.c. of sulphurous acid, U. S. P.), and 18.5 grams of invert sugar. The sulphuric acid present is probably due to the oxidation of some of the sulphurous acid, and the invert sugar to the influence of acid on the original "cane" sugar. The amount of sulphur dioxid (sulphurous acid) is variable in different bottles, as was attested by determinations on different specimens."

At about the same time the Association was investigating this preparation the chemists of the Health Department of the City of Milwaukee also analyzed it. The analytical data they obtained were sent to us by Dr. George C. Ruhland, Commissioner of Health of the City of Milwaukee, and they agree essentially with the findings of the Association's chemists.

In brief it may be said that Dr. Garbutt's "gift to humanity" is practically a mixture of sulphurous and dilute hydrochloric acids with small quantities of ammonium chlorid in water sweetened with syrup. The preparation is worthless and its method of exploitation is fraudulent.

Correspondence

William Withering and Digitalis—The Beginning of Syphilis

To the Editor:—It seems that few men look on medical history as of any importance, and a misstatement on that subject may be hardly worth correcting. Still, an editorial on it (THE JOURNAL, June 12, 1915, p. 1993) might as well be accurate, if accuracy makes just as good a story.

Withering did not wait ten years. He announced his observation of the properties of the foxglove immediately. Use of the foxglove became an instant fad, and Withering's book of 1786 is a protest against this. Listen to his preface: "Digitalis was in *1783* admitted to the Edinburgh Pharmacopeia, from which it will soon be dismissed if the *present* random *use* of it and the dosage that *is customary* in London shall continue." I am surprised that Cushny has never read the book. It is well worth while. It is a serious error to say, "Since the time of publication of Withering's book, its action in dropsy and on the heart has been generally recognized." It was given to cause diuresis. Dropsy was looked on as a primary disease for more than a generation following. Withering accounts for some of his failures on the ground that the dropsy was probably secondary, as there were evident signs of diseased viscera. Some of his most striking successes were in the dropsies that followed an epidemic of scarlatina. When digitalis was first used for its action on the heart, it was used as a cardiac sedative—in aneurysm and fevers, particularly the fever of consumptives.

Referring to the article by Dr. Pusey (THE JOURNAL, June 12, 1915, p. 1961), it might be well to mention the fact that recent careful study of all extant records of lazar houses and similar foundations fails to show any increase at the end of the fifteenth century of any sickness that could have been syphilis. It seems probable that the epidemic was not one of syphilis but of literary attention to that subject. Perhaps some of our modern epidemics are of this character. Meanwhile the doctrine of "epidemic influence" has been dismissed from medical thought as though there were no unknown factors in epidemiology calling for such a theory.

JOHN W. BOYCE, M.D., Pittsburgh.

A Pathognomonic Sign of Adherent Urinary Bladder in Inguinal Hernia

To the Editor:—In the last three cases of oblique inguinal hernia in which I have found the bladder attached closely to the sac of the hernia, I have found the arched muscular fibers of the internal oblique muscle, which ordinarily forms the floor of the canal (together with the conjoined tendon), closely attached to the sac. In the last case, on seeing this condition, I at once said to the assistants, "We have a portion of the bladder in this hernia."

My reason for calling attention to this is to ask the question, Is this a continuously positive evidence of an oblique inguinal hernia, with the bladder involved in it? Noting this condition in our dissection, we may save ourselves the chagrin of cutting into and through the bladder wall. These arched muscular fibers are very plain and closely adherent.

J. D. GRIFFITH, M.D., Kansas City, Mo.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ARTICLES ON EUTHANASIA

To the Editor:—I have been informed that there has been considerable discussion regarding the termination of the existence of the hopelessly insane, those suffering from painful, incurable diseases, and similar persons. Could you assist me in locating the literature?

D. R. LEWIS, M.D., New York.

ANSWER.—The following is a list of articles on euthanasia:

Tonic Effect of Sympathy with Others, Current Comment, THE JOURNAL, July 25, 1914, p. 237.
Supplicant for Euthanasia Recovers, Current Comment, THE JOURNAL, Feb. 28, 1914, p. 705.
The Problem of Euthanasia, Vienna Letter, THE JOURNAL, June 14, 1913, p. 1892.
Euthanasia as a Romantic Motive, editorial, THE JOURNAL, Nov. 9, 1907, p. 1609.
Physicians Do Not Approve of Chloroforming the Helpless, Minor Comments, THE JOURNAL, Feb. 24, 1906, p. 590.
Euthanasia for the Defective and Incurable, editorial, THE JOURNAL, Sept. 24, 1904, p. 896.
Euthanasia, Minor Comments, THE JOURNAL, Oct. 31, 1903, p. 1904.
Judicial Euthanasia, Minor Comments, THE JOURNAL, Feb. 2, 1901, p. 329.
Rosenberg, L. J., and Aronstam, N. E.: Euthanasia—A Medicolegal Study, THE JOURNAL, Jan. 12, 1901, p. 108.
Euphoria vs. Euthanasia, Minor Comments, THE JOURNAL, March 25, 1899, p. 674.
Euthanasia for Condemned Criminals, editorial, THE JOURNAL, July 23, 1898, p. 189.

WHAT IS A CALORY?

To the Editor:—In THE JOURNAL, May 22, 1915, p. 1719, Lusk says, "The calory is that quantity of heat required to raise 1 liter of water 1° C."

Alphonse Berget in his work, "The Earth: Its Life and Death," translated by Barlow, 1915, page 262, says, "A calorie is the amount of heat required to raise 1 gram of water 1° centigrade," and as this definition is repeated on page 263 it can hardly be a misprint.

The Standard Dictionary defines calory as the "amount of heat necessary to raise the temperature of one kilogram of water one degree centigrade," and the Century Dictionary gives about the same definition. May I ask the explanation of the discrepancy noted above? H.

ANSWER.—The original calory was the quantity of heat required to raise 1 gram of water 1 degree centigrade. On account of the inconvenience of this measure, there came to be the differentiation between the small calory, based on the gram, and the large calory, based on the kilogram, just as there is a differentiation between grammeters of work and kilogrammeters of work. In the majority of textbooks, the difference between the large calory and the small calory is defined, but in most articles on nutrition the large calory has for a long time been the standard of computation, and a careful distinction between the two values is usually neglected.

LITERATURE ON URTICARIA

To the Editor:—Please give me a list of the recent articles on urticaria. M. S. DAVIE, M.D., Dothan, Ala.

ANSWER.—The following is a list of articles on this subject:

Jacob, F. H.: Care of Urticaria Pigmentosa Treated with Roentgen Ray, *Brit. Med. Jour.*, June 1, 1907.
Ravitch, M. L.: Thyroid as Factor in Chronic Urticaria, *Jour. Cutan. Dis.*, November, 1907.
Vorner: Urticaria Solitaria, *Dermatol. Ztschr.*, January, 1913.
Ochs, E. F.: Urticaria Caused by the Sun's Rays, *Med. Rec.*, New York, July 30, 1910.
Wolff, W.: Quinin Effectual in Urticaria, *Deutsch. med. Wchnschr.*, Sept. 21, 1911.
Hardaway, W. A.: Notes, Chiefly Therapeutic, on Various Diseases of Skin, *Jour. Missouri State Med. Assn.*, May, 1912; abstr., THE JOURNAL, June 1, 1912, p. 1721.
Swann, A. W.: Urticaria Treated with Epinephrin, *Am. Jour. Med. Sc.*, March, 1913; abstr., THE JOURNAL, March 29, 1913, p. 1026.
Snow, J. M.: Purpura, Urticaria and Angioneurotic Edema of Hands and Feet in a Nursing Baby, THE JOURNAL, July 5, 1913, p. 18.
Calcium Lactate in Hay-Fever and Urticaria, Queries and Minor Notes, THE JOURNAL, Aug. 9, 1913, p. 428.
Salomon, H.: Dietetic Treatment of Urticaria, *Wien. klin. Wchnschr.*, Aug. 28, 1913; abstr., THE JOURNAL, Oct. 4, 1913, p. 1337.
Protein Poisoning — Anaphylaxis — Urticaria, Therapeutics, THE JOURNAL, Feb. 7, 1914, p. 456.
Amins and Urticaria, Current Comment, THE JOURNAL, Nov. 21, 1914, p. 1861.
Swann, A. W.: Human Serum in Urticaria, THE JOURNAL, Feb. 27, 1915, p. 737.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Montgomery, July 6. Chairman, Dr. W. H. Sanders, Montgomery.

ALASKA: Juneau, July 6. Sec., Dr. Harry C. DeVighne, Juneau.

ARIZONA: Phoenix, July 6-7. Sec., Dr. John Wix Thomas, Phoenix.

COLORADO: Denver, July 6. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

CONNECTICUT: New Haven, July 13. Sec., Dr. Charles A. Tuttle, 196 York St., New Haven; Eclectic: New Haven, July 13. Sec., Dr. T. S. Hodge, 19 Main St., Torrington; Homeopathic: New Haven, July 13. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.

DISTRICT OF COLUMBIA: Washington, July 13. Sec., Dr. Edgar P. Copeland, The Rockingham, Washington.

INDIANA: Indianapolis, July 13-15. Sec., Dr. W. T. Gott, 120 State House, Indianapolis.

MAINE: Augusta, July 6-7. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.

MASSACHUSETTS: Boston, July 13-15. Sec., Dr. Walter P. Bowers, Room 501, No. 1 Beacon St., Boston.

NEW HAMPSHIRE: Concord, July 6-7. Regent, Mr. H. C. Morrison, Concord.

NEW MEXICO: Santa Fe, July 12. Sec., Dr. W. E. Kaser, East Las Vegas.

NORTH DAKOTA: Grand Forks, July 6-9. Sec., Dr. G. M. Williamson, Grand Forks.

OKLAHOMA: Oklahoma City, July 13. Sec., Dr. Ralph B. Smith, 502 Daniel Bldg., Tulsa.

OREGON: Portland, July 5. Sec., Dr. L. H. Hamilton, Medical Bldg., Portland.

SOUTH DAKOTA: Pierre, July 12. Sec., Dr. Park B. Jenkins, Waubay.

UTAH: Salt Lake City, July 5. Sec., Dr. G. F. Harding, 407 Templeton Bldg., Salt Lake City.

WASHINGTON: Seattle, July 6. Sec., Dr. G. N. Suttner, Baker Bldg., Walla Walla.

District of Columbia April Report

Dr. Edgar P. Copeland, secretary of the Board of Medical Supervisors of the District of Columbia, reports the oral and written examination held at Washington, April 13-15, 1915. The total number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 12, of whom 11 passed and 1 failed. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
Georgetown University	(1913)	81.2
Howard University	(1912) 78.7; (1913) 82.6; (1914) 75.5, 75.5, 78.7	
Johns Hopkins University	(1907) 82.6; (1913)	82.7
Fordham University	(1913)	77.1
University of Vermont	(1914)	81.6
University of Virginia	(1908)	77.1
FAILED		
Howard University	(1914)	71

Colorado January Report

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the oral and written examination held at Denver, Jan. 5, 1915. The total number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. One candidate was examined and passed. Fourteen candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
Royal College of Physicians, Ireland	(1910)	83

College	LICENSED THROUGH RECIPROCITY Year Grad.	Reciprocity with
Denver College of Medicine	(1886)	Wyoming
George Washington University	(1905)	Dist. Colum.
Hahnemann Med. Coll. and Hosp., Chicago	(1902)	Illinois; (1909) Connecticut.
Northwestern University	(1909)	Illinois
Rush Medical College	(1904)	Illinois
Kansas City Medical College	(1890)	Missouri
Marion-Sims College of Medicine	(1892)	Missouri
Coll. of Phys. and Surgs. in the City of N. Y.	(1863)	California
Columbia Univ., Coll. of Phys. and Surgs.	(1912)	New York
Cincinnati College of Med. and Surg.	(1874)	Iowa
Western Reserve University	(1909)	Ohio
Jefferson Medical College	(1912)	Nebraska
University of Tennessee	(1894)	Kentucky

West Virginia April Report

Dr. S. L. Jepson, secretary of the West Virginia State Board of Health, reports the oral, practical and written examination held at Charleston, April 13-15, 1915. The total number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 80. The total number of candidates examined was 14, of whom 12 passed and 2 failed. Fifteen candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
George Washington University	(1913) 89.6; (1914)	87.7
Baltimore Medical College	(1911)	86.7
North Carolina Medical College	(1913)	88.9
Jefferson Medical College	(1914)	91.4
University of Pennsylvania	(1914)	90.6
Medical College of Virginia	(1913) 81.7; (1914) 81.4, 82.8, 83.8, 85, 86.4	
FAILED		
Bennett Medical College	(1915)	77.2
Maryland Medical College	(1912)	79

College	LICENSED THROUGH RECIPROCITY Year Grad.	Reciprocity with
Hospital College of Medicine, Louisville	(1907)	Tennessee
University of Louisville	(1910) (1913)	Kentucky
Tulane University of Louisiana	(1910)	S. Carolina
Baltimore Medical College	(1912)	Maryland
Maryland Medical College	(1912)	Tennessee
University of Maryland	(1904)	S. Carolina
Starling Medical College	(1906)	Ohio
Jefferson Medical College	(1874) (1911)	Penna.
Medico-Chirurgical College of Philadelphia	(1895)	Indiana
Tennessee Medical College	(1909)	Tennessee
Vanderbilt University	(1913)	Mississippi
Medical College of Virginia	(1908)	Virginia
Royal University of Palermo	(1903)	Georgia

Book Notices

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Embracing the Entire Range of Scientific and Practical Medicine and Allied Sciences. By Various Authors. Third Edition. Edited by Thomas Lathrop Stedman, A.M., M.D. Volume 5. Cloth. Price, $7. Pp. 923, with 739 illustrations. New York: William Wood & Co., 1915.

This volume of a well-known series is distinguished by several topics of importance. Of particular interest are the various articles on hearing by Drs. Sewall and Voorhees. Naturally the heart is given a large amount of space, most of the articles being contributed by Dr. Warthin. The summary on heredity occupies about twenty-five pages, and gives, in brief, facts regarding many aspects of the subject as presented by Drs. Galton and Pearson. The statement of the mendelian law and its various aspects is sufficiently clear to form a good basis for a further study of the subject. The bibliographic references appended to the article form a useful list to those wishing to investigate the subject further. Hernia receives full attention, the various operative procedures being adequately illustrated. The article on histologic technic is modern and accurate, and contains numerous directions for the making of various preparations. The subject of hospital construction and equipment is well illustrated and seems thorough. It is regrettable, however, that most attention is devoted to the building and management of large hospitals, and but little given to the building and equipment of institutions for small towns where, in fact, most help is needed. The article on hospital ships, while of interest, occupies relatively too much space. The paper on "House Sanitation" by Dr. Kober is a very valuable one. It is profusely illustrated and practical. Among other subjects receiving attention are hydrotherapy, military hygiene and hysteria.

Immunity receives what might be called a mere mention. Other important headings under the letter "I" are infancy and infant feeding, influenza, inhibition, insects and their parasitic activities, and the various facts concerning intestinal medicine and surgery.

Two articles are by Dr. Fielding H. Garrison: one on medical journalism, the other on medical libraries; both of them are exceptionally interesting and complete. Several articles of practical importance concern the kidneys, labor, the larynx and leukemia.

The topics mentioned represent naturally only a few of the many items covered in the handbook. They have been mentioned because the space given to them indicates a special effort on the part of the writers of these portions of the book to do adequate work. In a volume of this nature it is, of course, impossible to ask that every section be up to the quality of the whole. In general, however, it may be stated again that the book is an achievement of importance.

COMMEMORATION VOLUME. Infection and Immunity, Vaughan; Syphilis as a Modern Problem, Pusey; Epidemic Poliomyelitis, Flexner; Yellow Fever, Gorgas; Municipal Sanitation, Jordan; Cancer: Prevention and Cure, Mayo; Statistics of Cancer Mortality, Hoffman; Malaria, Bass. Cloth. Price, $2.50. Pp. 349. Chicago: American Medical Association, 1915.

This book is issued as a tribute to the workers who made it possible to build the Panama Canal. The contents are: Victor C. Vaughan, Infection and Immunity, 109 pages; William A. Pusey, Syphilis as a Modern Problem, 82 pages; S. Flexner, The Mode of Infection and Etiology of Epidemic Poliomyelitis, 5 pages; W. C. Gorgas, Yellow Fever, 9 pages; E. O. Jordan, Municipal Sanitation, 10 pages; William J. Mayo, The Prevention and Cure of Cancer, 18 pages; Frederick L. Hoffman, Some Essential Statistics of Cancer Mortality Throughout the World, 14 pages; Charles C. Bass, Malaria, 17 pages.

The shorter articles are instructive. Of the two long articles, that by Vaughan is direct and forceful in the introductory and general sections; it also contains much interesting historical matter.

The contribution by Pusey on syphilis as a modern problem deserves particular mention because it is a successful attempt to present to the intelligent nonmedical reader the essential facts about syphilis as it affects the individual and society. The article is a substantial, interesting, and altogether sane presentation. It is an article which, just at this time, will prove of great service in interesting the public in syphilis as a sanitary problem. It should be widely studied by physicians as well as laymen, and physicians will further the cause by directing others outside the ranks to this book.

To quote from the foreward, the volume is "an incomplete and imperfect statement of what medicine has done, is doing, and an indication of what it may do for the common good." It is an expression of the interest the medical profession feels in the general welfare, and its effect will be to increase the cooperation of intelligent persons in the task of reducing preventable disease.

Society Proceedings

COMING MEETINGS

American Ophthalmological Society, New London, Conn., July 6-7.
Montana State Medical Association, Bozeman, July 14-15.
Washington State Medical Association, Tacoma, July 20-22.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Meeting Held June 2, 1915

The President, DR. JAMES C. WILSON, in the Chair

Syphilitic Affections of the Heart and Aorta

DR. J. M. ANDERS, Philadelphia: The advent of the Wassermann reaction has shown that the etiologic rôle of syphilis in diseases of the cardiovascular system has heretofore been underestimated. While I would not say that syphilis is the principal factor in the production of heart disease, it can be assumed that rheumatism and syphilis head the list as causes of organic injury to this organ. While the cardiac lesions caused by the *Spirochaeta pallida* are usually considered as belonging to the tertian stage of syphilis, Grassman, Brooks and other investigators have expressed the opinion that serious damage may occur as early as the forepart of the second stage. Aortic and cardiac syphilis may be the result of hereditary syphilis. The claim made by Landois, Citron, Hausmann, Sears and others that syphilis may affect the heart alone is interesting and important. In two infants who died, one at three months of inanition, the other at eight days of asphyxia, Warthin and Snyder found the *Spirochaeta pallida* in the heart muscle, while neither histologic lesions nor spirochetes were found elsewhere.

Among the commonest cardiovascular conditions due to syphilis are myocarditis, aortic regurgitation, angina pectoris and mesaortitis often resulting in aneurysm. Mesaortitis with or without coronary changes is commonly the primary complaint in cases in which, as frequently occurs, two or more of the above-named affections are found in association. That this condition is due in many cases to syphilis has been demonstrated both by postmortem evidence and the results of carefully conducted therapeutic observations. The intimate connection between syphilis and aneurysm, well known to the older writers, has been emphasized by those of modern times. With Hausmann, however, I would caution the medical profession against regarding every case of aneurysm, even in syphilitic subjects, as due to syphilis. Two differentiating etiologic factors are that the root of the aorta is the usual seat of syphilitic aneurysms, which aneurysms are frequently multiple. Syphilis is now generally regarded as an essential factor in the causation of aortic incompetency, more particularly in cases developing before the forty-fifth year of life. As in aneurysm, a positive Wassermann reaction alone, unsupported by clinical evidence, does not warrant an assured diagnosis of syphilis, although it renders highly probable the existence of syphilis. On the other hand, it must be remembered that aortic incompetency in a syphilitic subject may be due to other causes, especially if the lesion develop after middle life. Early involvement of the myocardium is not infrequent in the course of syphilis. Early recognition is difficult but important. The symptoms do not differ from those of myocarditis due to other infections, and it has been shown that they disappear promptly under energetic antisyphilitic treatment. Anginoid pains are occasionally present, and obliterative endarteritis implicating the coronaries and producing myocarditis may result in attacks of true angina pectoris. Although a positive or negative Wassermann test is not an absolute criterion, Brooks contends that it is better than the 70 per cent. of error based on the history or clinical findings alone. I have collected 270 cases of angina pectoris from the literature, of which only seventy-two, or 26.5 per cent., gave evidence of syphilis. This percentage is much too small, since in 250 of the cases no mention was made of a Wassermann test. The close association of syphilis and angina is amply confirmed by modern authorities.

Doubtless the incidence of cardiovascular disease would be much lessened by a more systematic and vigorous treatment of syphilitic infection in general. Physicians should feel the serious responsibility of the treatment of early syphilis in the wisest manner possible. This is further emphasized in the hazard of administering salvarsan or neosalvarsan in the severer forms of cardiovascular syphilis. It has been found that death, occurring suddenly or after several days from the use of these agents, is commonly due to myocardial degeneration secondary to coronary lesions.

DISCUSSION

DR. GEORGE W. NORRIS, Philadelphia: I agree with Dr. Anders that, since the discovery of the *Spirochaeta pallida* and our knowledge of the Wassermann test, we have learned to recognize a number of lesions definitely syphilitic which in the past we barely suspected. In the last year more attention has been given to syphilitic nephritis, and it is somewhat comforting to know that if we do give mercury or salvarsan to these patients we are apt rather to benefit their nephritis than to injure the kidneys. One point is the frequency with which sudden death may occur in syphilitic myocarditis. Among the symptoms which have struck me as having some guiding value are low blood pressure, mild

anginoid attacks associated with dilatation of the left ventricle, and, as Dr. Anders has emphasized, cardiac irregularity followed by auricular fibrillation. In such cases, salvarsan must not be administered without due consideration. I am particularly interested also in the question of aortitis in the young. In a considerable percentage of newborn infants dying shortly after birth, presence of the *Spirochaeta pallida* has been noted in the aorta. Syphilis is inadequately treated in our dispensaries. Hospitals which refuse to treat this disease in its early stages are perfectly willing to give aid when the patient returns at a practically incurable stage. A more efficient treatment of syphilis in dispensaries is one of the crying needs of today.

DR. JAMES TYSON, Philadelphia: In my experience as a young man in dispensary service, our method of treating cases which included rheumatoid affections was to give first potassium iodid. Failing with this, we added mercuric chlorid, and an astonishingly large number of patients were benefited. It would seem, therefore, that the new methods of treatment confirm the old ones. I have sometimes thought that although this was a rough and ready method of treating symptoms, we might, perhaps, adhere to it with advantage a little more frequently than we do in modern times.

DR. J. F. ANDERS, Philadelphia: I have seen several very remarkable results in nephritis due to syphilis from the alternate, and also from the separate use of salvarsan and mercury. We must, however, be very certain that the syphilis is the real cause of the cardiovascular and renal conditions. Mercury has its selective affinity for the kidneys, and there is no other variety of nephritis than the syphilitic in which its use is justified. While it is true that, since the discovery of the Wassermann reaction, the true importance of syphilis as a factor in many heart diseases has been in great part established, this cannot be said of this test in relation to angina pectoris. The close association of angina pectoris and syphilis remains to be established, according to my figures, at all events; but I believe it will be, once the profession is alive to the importance of making Wassermann tests in all cases of angina pectoris. Neglect to examine the heart in the early stages of syphilis systematically is attended with untoward results in many cases. In at least half of these cases, symptoms arise which should arouse suspicion of cardiac involvement and lead to the most vigorous antisyphilitic treatment. In regard to cardiac involvement in the course of syphilis, the words of John Locke truly apply: "Prevention is better than cure and far cheaper."

MISSOURI STATE MEDICAL ASSOCIATION

Fifty-Eighth Annual Meeting, held at St. Joseph, May 10-12, 1915

(*Concluded from page 2162*)

Preventive Medicine Obstetrics

DR. F. E. WILHELM, Kansas City: Deformed pelvis is usually a result of rickets in childhood. It is common in tenements, rare in the Middle West. Gonorrhea is the greatest enemy to pregnancy, a menace to the eyes of the unborn babe; 30 per cent. of all blindness is due to gonorrheal ophthalmia. Syphilis causes sterility. Few congenital syphilitics survive. Preparations for labor should be made three or four weeks in advance. Cleanliness is the great necessity. Presentation can easily be determined by abdominal examination—location of fetal heart sound. No vaginal examination should be made after labor begins. Sterile gloves should be used; anesthesia is essential and safe; placental delivery should not be rushed; one may wait twelve hours or more in the absence of bleeding. Manual delivery of the placenta is rarely necessary. A torn perineum should be repaired at once; the cervix is to be left alone, except for severe hemorrhage. The mother requires quiet, good food, a daily bath, good bowel flushing within thirty-six hours, and care of the nipples and breast. The infant should have boric acid applied to the eyes. Swabbing of the mouth should be avoided, as the toothless mouth needs no washing. Care of cord with alcohol should not be overlooked. Regular nursing should be given at intervals of from two to three hours.

DISCUSSION

DR. B. W. TOOTHAKER, St. Joseph: We have all had some cases of gonorrheal ophthalmia, but I believe we can prevent it by using 25 per cent. solution of argyrol. Silver nitrate is sometimes followed by inflammation of the eyelids. Of anesthetics I prefer ether, and although some patients do not first care for anything, they are very glad to take it after they receive a few whiffs. In delivering the head I always endeavor to do so between the pains, and I have very few tears. In the care of the bowels I have my patients take an enema, using plain warm water.

DR. E. A. BURKHART, Kansas City: The blood pressure should be taken at regular intervals, at least twice a month. The importance of using boiled gloves ought to be emphasized. We are realizing more and more the necessity of staying out of the uterus and making no manipulations, even in many cases which seem to present a clear indication for going into the uterus. The modern method of supporting the breasts should be emphasized. It is being realized that there is an engorgement of the breasts, and that pulling on the breasts causes a venous stasis which a support will very largely relieve.

DR. CARYL POTTER, St. Joseph: Surgeons see too much poor repair of the perineum following obstetric practice. The obstetrician should repair the deep perineum as well as the superficial perineum, and if he is not sure he can secure the correct position of the levator ani, he can call in a gynecologist. If you feel that a laceration of the perineum is imminent and you are not sure of your repair, you should do a pubiotomy.

Etiologic Factors in Vomiting of Pregnancy, and How to Overcome Them

DR. JOHN D. SERA, Bland: The condition of the stomach is rather remote to the cause of the condition. Vomiting in pregnancy occurs mostly in young women who have never borne children. The habits of these young women are not so sanitary as they should be; as a rule they neglect their bowels; the colon bacillus very often gains entrance into the vagina, and the uterus and its appendages thus become infected. As a rule, vomiting in pregnancy should be regarded as an infection, which remedial agents should be employed to combat. This can best be accomplished by daily vaginal douches, high colonic enemas and by the use of suitable vaccines. The stomach is treated by giving it rest and by abstaining from giving drugs by the mouth. The most rebellious cases yield to a few days' treatment along this line.

Empyema

DR. B. A. POORMAN, Kansas City, described the kind of infection and the symptoms, diagnosis and treatment, after which he discussed the various methods, giving the technic which he has used in a few cases, and also the treatment in chronic cases by decortication as outlined by Fowler and Delorme, followed by a report of ten cases.

DISCUSSION

DR. F. H. SPENCER, St. Joseph: The mortality rate of 22 per cent. in operative cases is too high. I would emphasize the importance of drainage by removal of the ribs in operative cases. Kocher lays great stress on this in the old operation. In the decortication operation there is a question sometimes as to whether the Fowler or the Ransohoff operation is the better. Dr. Poorman says that Fowler decortication is the proper operation, but I believe the Ransohoff should be combined with it in many cases. Bismuth paste should be mentioned only to be condemned. While Beck lays stress on this method, it has not given good results.

DR. E. M. ROSEBERRY, Neosho: I have had three cases of empyema in the last three months. In one I inserted the needle three times before I found the pus. I resected a rib in each case, and the patients are all doing well at this time.

DR. L. J. DANDURANT, St. Joseph: It seems remarkable that a disease which was so well known and treated in the time of Hippocrates should be so often overlooked in these days of progress and fine methods of diagnosis. With the definite symptoms which follow pneumonia and indicate a developing empyema, and in the absence of securing pus with the needle, we should not hesitate to open the chest and make an exploration. I believe that in every case in the adult, operation can be performed under local anesthesia. In Europe I never saw any other kind of anesthetic used.

DR. J. M. HALE, Dearborn: In the pleuritic involvements following pneumonia, the internist should have the patient practice deep inspiration in the later stages of pneumonia. This can be done three or four times a day and would, I believe, reduce the number of cases of adhesions.

DR. C. B. FRANCISCO, Kansas City: A point seemingly overlooked by the general surgeon in resecting ribs in children is the fact that lateral curvature will follow this procedure. Orthopedists see these cases often and feel that the surgeon should practice some discrimination and give protection against curvature in children. My experience emboldens me to preach conservatism in dealing with this condition in children, because it is a deformity that often goes on to bony change.

ASSOCIATION OF AMERICAN PHYSICIANS

Thirtieth Annual Meeting, held at Washington, D. C., May 11-13, 1915

(Continued from page 2164)

Isolation of a Toxic Substance from the Blood of Uremic Patients

DR. NELLIS B. FOSTER, New York: Accepting the hypothesis that uremia is a toxemia, the attempt has been made to isolate the specific toxin from the blood of patients with epileptiform uremia. This endeavor has been successful in that a substance, which caused death when injected into small animals, was separated from the blood of the seven cases of uremia studied. Eleven control bloods representing various diseased states other than uremia were also studied, but none of these yielded a toxic body. The method of separation excludes, it is believed, errors due to manipulation of unstable protein complexes. The final product is recovered as a crystalline auric chlorid.

Long Fasting in Diabetes

DR. FREDERICK M. ALLEN, New York: Partial pancreatectomy with retention of the duct produces a satisfactory experimental diabetes, and animals prepared in this way can be studied advantageously. In mild experimental cases, dietetic management suffices to keep the diabetes in abeyance. More severe cases quickly pass into an uncontrollable condition. If, in controlled cases, glycosuria is allowed to reappear, the animals quickly go down with destruction of the islands of Langerhans. Those kept sugar free stay lively and show no injury of the islands. Patients at the Rockefeller Institute have been treated on the basis of these animal experiments. An initial fast of from one to eight days will completely stop glycosuria in most cases. Fasting can be undertaken in very severe, weak cases without injury, and with benefit. There are some unsuccessful cases due to infections or other complications, but these do not constitute contraindications to fasting. If undesirable symptoms arise in the course of fasting, after an interval of careful dieting, fasting can be resumed and carried to success. If, after fasting and becoming sugar free, the sugar and acidosis are allowed to return, the last state of that man is worse than the first; but cautious underfeeding, with occasional fast days, will suffice to keep these patients in good condition. Well established is the advantage of keeping the patients below weight and of maintaining a low fat content in the diet, thus reversing the doctrine of Naunyn and others. Dietetic restrictions are renewed on the detection of ketonuria or increase of blood sugar. To insure freedom from ketonuria and glycosuria, fat is necessarily withheld from diet.

Present-Day Treatment and Prognosis in Diabetes

DR. E. P. JOSLIN, Boston: Children do well under the fasting method; they obey readily and cooperate well. Complications disappear more rapidly than under any other management, especially carbuncles. A case of pregnancy with glycosuria to 6 per cent. was carried successfully to term and was delivered by cesarean section with recovery of mother and child. Operations of other sorts have been successfully carried out on diabetics. Cases of long duration and patients with severe acidosis do well under starvation management.

The following points are important in the technic of the fasting treatment: Patients must be educated just as they have been in tuberculosis; they must not gain weight too fast; they must rest; they must remain under observation.

Studies in Experimental Pancreatic Diabetes

DRS. A. A. EPSTEIN and S. BAEHR, New York: The studies were made on depancreatized cats. Because of excessive thirst and large water intake, it was necessary to estimate changes in blood volume, which was done by a method of comparing the proportion of cells to plasma. Corrections of the blood sugar findings were made for blood volume fluctuations. All the cats showed a progressive rise in blood sugar, quite marked just before death. (This is not due to tissue decomposition, because the rise begins while the animal is quite lively.) With the appearance of hyperglycemia there is a diminution of glycosuria. This is no doubt due to a renal insufficiency for sugar. For the reason that polyuria continues after the disappearance of sugar, failure of circulation is ruled out as a cause. Experiments with pancreatectomy and double nephrectomy resulted in the production of a rise in hyperglycemia, rapid in well-nourished animals; in starved cats, this rise was late in appearing, but when it appeared it was acute and reached the same level eventually as in the well-fed cats.

Intravenous Injection of Dextrose and Depancreatization

DRS. I. S. KLEINER and S. J. MELTZER, New York: When dextrose is injected intravenously into normal animals it disappears rapidly from the circulation, and the sugar content of the blood is, in a short time, quite normal again. In previous investigations we found that in depancreatized dogs there is a tendency for the circulation to retain for a longer period a part of the injected dextrose. In recent experiments it was further found that, when with the infusion of dextrose in depancreatized dogs, an emulsion of pancreas is simultaneously injected, the circulation seems to lose its power to retain the injected dextrose. Finally it was observed very recently that an injection of a pancreas emulsion in a depancreatized animal is apparently capable of reducing the hyperglycemia to normal. The evident theoretical importance of these facts shall not be discussed here.

Discussion on Diabetes

DR. FRANK BILLINGS, Chicago: The study of patients at rest in a hospital is only part of the problem; it is necessary to study them after exercise, after return to ordinary mode of life. For years, I have taught patients how to examine their own urine. While it may be harmful to give fats in general diabetes, butter fat is not harmful. Diabetics may take butter fat or bacon fat and may do so for years. Whatever may be said, it is impossible ever really to control diabetic patients; they will do as they please as soon as they get beyond the observation of the doctor.

DR. HENRY KOPLIK, New York: I regard diabetes in children as a very grave disease, and the prognosis as always bad. This is not inconsistent with the fact that these children may go along for years without symptoms; they finally relapse and therefore the prognosis should be cautious. It is surprising how easily children bear starvation, and how quickly sugar disappears under this form of treatment.

DR. HENRY A. CHRISTIAN, Boston: We usually find one or two days of starvation sufficient to get a diabetic patient sugar free; then one or two days are required to establish the standard of carbohydrate utilization; and then one or two more days to educate the patient, and at the end of six days of hospital care, such a patient is ready to go out. It is an ideal disease for the application of the class management in the outpatient department. We teach our patients to follow their carbohydrate intake and output, to cook their food and to examine their own urine. These patients are taught to use the Benedict method, which, by the way, is incorrectly given in many of the books; too little alkali is usually specified.

DR. L. F. BARKER, Baltimore: One of the good things which may come out of this meeting is the putting into the consciousness of practitioners all over the country the advantage of quickly starving diabetes patients until they are sugar free and acid free. But a sharp blow will be necessary to dislodge the idea that carbohydrate feeding is necessary in acidosis. As to the reduction of body weight, it is doubtful whether it is proper to insist on this in cases with good food tolerance, because of the harmful effect of underweight on the nervous system.

DR. R. T. WOODYATT, Chicago: For eight years, at the Presbyterian Hospital, I have used this method of starvation in diabetes, following the method of Muller of Vienna. There can be no doubt of the great value of it. I have seen three deaths from infections during a starvation period.

DR. FREDERICK M. ALLEN, New York: The blood sugar should be kept normal; it is tested regularly. This is necessary in young patients with acute cases; but it may not be necessary in old patients who will live to die of something else. I have not yet seen an infected patient harmed by fasting. I have seen cases of glycosuria coming on in the midst of an infection, and they may be cleared up by fasting with surprisingly good results.

DR. E. P. JOSLIN, Boston: I have records of ninety cases in people under 20; two thirds of these patients are now dead; the others are mostly in good condition. In any group of diabetic children who live long, there will be found evidence of hereditary influences.

DR. A. A. EPSTEIN, New York: I should like to emphasize the fact that it is necessary to consider the blood volume in estimating any ingredient of it.

Significance of Acro-Ataxia and Proximal Ataxia of Extremities in Differentiating Between Disease of Peripheral Nerves and of Spinal Cord

DR. C. F. HOOVER, Cleveland: In ataxic states of the extremities, two varieties may be differentiated: one in which the distal muscles are involved, called acro-ataxia; another in which the proximal muscles are involved, called proximal ataxia. In a case of primary anemia, stereognosis was preserved and no ataxia in the ordinary sense was observed; but extreme ataxia of the intrinsic muscles of the hands and feet was found. In fifty-two further cases of primary anemia, acro-ataxia has been noted, with proximal ataxia added as a late manifestation. In lead and alcoholic ataxia, however, the relation of the time of appearance of the two forms is reversed. In spinal cord disease, proximal ataxia appears much sooner than acro-ataxia: in the ataxia of the anemic type, on the other hand, no Romberg sign may be elicited because the ileofemoral muscles are not involved. In a case of diabetes with apparent diabetic neuritis the presence of proximal ataxia without acro-ataxia was noted; examination of the spinal fluid revealed tabes as the cause, and the ataxia improved under antisyphilitic treatment. I have been able to diagnose primary anemia in patients over 50 by the presence of acro-ataxia and loss of vibratory sense independent of blood examination. In a man with an obstructive prostate, there was a proximal ataxia without acro-ataxia. The spinal fluid being normal, the diagnosis of cancer of the prostate with metastasis in the cord was made and confirmed. In a case of apparent primary anemia, with a mass in the left hypochondrium, there were loss of reflexes and proximal ataxia without acro-ataxia; the diagnosis of hypernephroma with metastasis in the cord was made and confirmed.

Peculiarities in the Immunity Induced in Guinea-Pigs by the Instillation of Horse Serum Through the Nose

DRS. HENRY SEWALL and CUTHBERT POWELL, Denver: When a few drops of horse serum are instilled into the nose in guinea-pigs, and the dose is repeated from one to five times at intervals varying from one to twenty-four days, about half the animals survive an intravenous injection of horse serum given sixteen days after the last instillation. This survival is sometimes without symptoms, but cannot be due to previous desensitization, for a second intravenous injection is frequently well borne twenty-four days after the first. When, after several intravenous injections of 0.38 c.c. of horse serum, guinea-pigs fail to react, the dose may, in certain cases, be doubled or trebled with like result. Contrary to the usual experience, we have found in two groups of refractory animals that a large intravenous injection was better borne after a resting period of 101 and eighty days, respectively, than in controls after thirty-six and twenty-eight days. When the blood serum of these immune animals was injected intraperitoneally into normal guinea-pigs, the latter, when given 0.25 c.c. serum by the vein from twenty-three to forty-eight hours afterward, usually reacted very slightly. As is well known, the offspring of mothers sensitized by a single subcutaneous injection of serum are themselves highly sensitized to a small toxic dose of serum given within about six weeks. In our animals treated by instillation only, five out of seven of the offspring survived the toxic injection.

Present Status of Hygiene or Public Health and Its Future in America

DR. W. W. FORD, Baltimore: Pettenkofer founded the science of public hygiene, and in Germany and Austria his teachings received ready practical application, spreading thence largely all over Europe. As a result of his campaign, the mortality from zymotic diseases fell. The great fruits of this work ripened in the decade 1870-1880, but with the advent of bacteriology, Pettenkofer's work had a setback. Bacteriology became hygiene for a time, until lately, when Pettenkofer's plan has been revived, modified by bacteriology. In Great Britain, since the sanitary laws of 1848, public health matters have been on a sound basis, but the emphasis has been on public works, such as water supplies, drainage, sewage disposal, etc. Preventive medicine is the gift of France, but it has been twisted by the work of the Pasteur Institute. The subject is a major matter in the universities of Austria-Hungary, France, Germany and Great Britain. But it is still neglected in this country, and chaotic ideas prevail. The departments of health in states and cities have long recognized the needs of the situation, but the national government still lags behind, notwithstanding the great work done by the U. S. Public Health Service. The subject has gradually appeared in the curriculums of all medical schools, but at this time it is a major subject in only five universities. This tardy development is not due to the indifference of medical men, but to the failure of the universities to recognize the need. Future development needs: 1. Adequate instruction of medical and other university students. The facilities for this are not now available. 2. Facilities for special training of special health officers. 3. Institutions for public instruction of laymen for the proper utilization of present hygienic knowledge.

DISCUSSION

DR. M. J. ROSENAU, Boston: The development of the science of public medicine may be divided into three stages: (1) public hygiene under the teaching of Pettenkofer, this having to do with water supplies, disposal of sewage, wastes, etc. This took care of certain diseases, but failed to influence others, which led to (2) preventive medicine. This step grew out of work stimulated by the deficiency of the first, and depends on knowledge thus gained of the modes of transmission of disease. We are now in the midst of the era of (3) personal hygiene, which is marked by such problems as the prevention of syphilis, gonorrhea, etc. The needs of the situation must be met by the schools.

DR. JOHN F. ANDERSON, Washington, D. C.: One point of importance is that we can obtain good conditions if we can obtain the money. The crux of the situation is the efficient health officer. A health department requires a definite number of units to be effective; the personnel of the units need only be multiplied for larger communities. If cooperative training in the science of public health is undertaken by the universities, there should be some way to fix the necessary scope and direction of such training.

DR. A. C. ABBOTT, Philadelphia: Hygiene has largely come to mean personal hygiene, and is now assiduously taught in physical culture gymnasiums, in the common schools and in periodical literature. At present, popular discussion covers so wide a range that few individuals are capable of holding all the information available. What is wanted is leadership in public health science: leadership in a broad way—men who realize its social aspects, its political limitations, its scientific possibilities. It is true that many teaching institutions have not the physical capacity to teach this subject; but in almost every state there are universities which can, and many of which do, train men to assume this leadership.

Uric Acid Metabolism in Gout

DR. JOSEPH H. PRATT, Boston: On purin-free diet, the average uric acid content of the blood of gouty patients was 3.7 mg. per hundred gm. blood. In normal individuals on mixed diet, the uric acid average is 1.8 mg. per hundred gm. blood; 2.5 mg. is the upper level in normal persons. One cannot make the diagnosis of gout from a single examination of blood, because the uric acid in the blood may be normal at times in gout. A single high uric acid finding is not sufficient for the diagnosis of gout, because it may be high in other diseases, even as high as 5 mg. per hundred gm. blood. The blood of patients on rich purin diet has been studied; the sweet bread meal was used. One patient whose blood uric acid was 1.6 mg. (lowest in the literature) on the fourth day reached 4. mg. per hundred gm. blood. There was a variable behavior in different cases: after the sweet bread meal there may be a drop in uric acid for a day or two, with later a sharp rise. In healthy persons there is a distinct rise in four hours after the meal. It cannot be suggested that the method will have any diagnostic value.

(*Continued on page 133*)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Diseases of Children, Chicago

June, IX, No. 6, pp. 461-556

1 *Use of Bismuth Pills in Fluoroscopic Examination of Infant's Stomach. A. F. Hess, New York.
2 *Frequency of Infection with Tubercle Bacillus in Childhood. B. S. Veeder and M. R. Johnston, St. Louis.
3 Case of Bilateral Glioma of Retina. H. F. Hansell, Philadelphia.
4 *Clothing as Factor in Production of Heat Stasis. W. B. McClure and L. W. Sauer, Chicago.
5 *Tuberculous Tumors of Brain. E. B. Friedenwald and W. Greenfeld, Baltimore.
6 Ammonia and Urea Content of Infants' Stools. J. L. Gamble, Boston.
7 *Forms of Nitrogen in Stools of Infants. D. D. Van Slyke, A. M. Courtney and H. L. Fales, New York.

1. **Fluoroscopy.**—This study was carried out by Hess by means of keratin coated bismuth pills having definite circumferences corresponding to the size of the catheters which can readily be introduced past the pylorus in infants. The purpose was to furnish a simple means of gauging the size of the pylorus and judging whether this sphincter was normally patent or not. It was found that under normal conditions objects do not leave the stomach in direct ratio to their size; that, in fact, larger objects are apt to be propelled into the intestine more quickly than smaller ones. There was a marked difference in the emptying time of the stomach, according to the posture of the infant. The delay in the passage of the pills when the infant lay on its left side, and the hastening of their passage when the infant was placed on its right side, were almost constant phenomena. It would seem that this observation has clinical significance and is capable of practical adaptation. It may prove to be of advantage to place infants on the right side when there is an evident delay in gastric digestion. In cases of pylorospasm there was a retardation in the passage of the pills from the stomach into the intestine. The degree of this delay varied in accordance with the degree of obstruction. The test does not enable one, however, to make a differential diagnosis as to the functional or the organic nature of the obstruction. In cases characterized by pyloric obstruction it was found that the pills left the stomach according to their size. In mild cases of spasm papaverin was found to be effective in definitely shortening the time of exit of the pills; in severe cases it lessened vomiting but did not facilitate the passage from the stomach.

2. **Tuberculosis.**—A study by Veeder and Johnston of tuberculin tests in 1,321 hospital children in St. Louis shows that the percentage of positive reactions reaches a maximum of 44 per cent. at the age period of 10 to 14 years, including cases with clinical tuberculosis. If children with clinical tuberculosis are excluded the percentage giving positive reactions at the 10 to 14 age period is only 36. These figures are much lower than the usual "90 per cent." figure for the incidence of infection with the tubercle bacillus in children by their fourteenth year, which has gained such widespread publicity and which is based on the figures of Hamburger for Vienna. The intradermic tuberculin test has given but a slight increase in the percentage of positive reactions over the percentage of positive cutaneous reactions. The authors have found that positive tuberculin reactions are of much service in the diagnosis of tuberculosis in infancy and early childhood, and that both positive and negative reactions in conjunction with the physical signs and symptoms have been of diagnostic value in individual cases among older children, although as a whole they do not indicate whether the infection is active or latent.

4. **Clothing and Heat.**—In considering what steps may be taken to prevent or reduce the high summer death rate of infants, McClure and Sauer believe that a number of factors must be adjusted: 1. Decrease heat production by giving less food, more suitable food and more water. 2. Increase heat elimination by less and more permeable clothing, better circulation of air and frequent baths. 3. Guard against infection (through food and otherwise).

5. **Tuberculous Tumors of Brain.**—The most interesting observations in the case reported by Friedenwald and Greenfeld are the great masses of tubercle bacilli found in the vessel walls and within the caliber of the vessels in the tubercles in the brain and bronchial lymph nodes. The disintegration of the caseating thrombi would result in throwing great masses of tubercle bacilli into the circulation.

7. **Forms of Nitrogen in Stools of Infants.**—Of the total nitrogen of infants' feces, from 50 to 70 per cent. was found as proteins and amino acids, 2.4 to 24 per cent. as free amino acids, and from 3 to 37 per cent. as ammonia. Usually, though not invariably, the higher percentages of amino-acid nitrogen were found in the looser stools, quicker passage through the intestine resulting in somewhat less complete absorption of these protein digestion products. The results show no evidence of antagonism between the processes of acid and ammonia formation respectively in the intestine. Urea was certainly absent in three fourths of the stools examined, and in the other fourth formed only from 1 to 5.6 per cent. of the total nitrogen. Despite the care taken to keep the feces free from urine, the authors do not feel certain that at least a part of the few positive results may not have been due to the admixture of traces of urine. As some even of the watery stools contained no urea, it appears improbable that the intestine is capable of rendering significant assistance to the kidney, at least in the excretion of urea.

American Journal of Medical Sciences, Philadelphia

June, CXLIX, No. 6, pp. 781-936

8 Some Problems in Pathology of Syphilis. J. A. Fordyce, New York.
9 *Value of Certain Tests for Diagnosis and Prognosis in Chronic Nephritis. C. Frothingham, Jr., Boston.
10 Practical Importance of Examination of Stools in Infants. H. M. McClanahan and J. C. Moore, Omaha.
11 *Immunity in Tuberculosis; with Special Reference to Racial and Clinical Manifestations. E. R. Baldwin, New York.
12 Fever in Tuberculosis. H. A. Bray, Ray Brook, N. Y.
13 Exudates in Artificial Pneumothorax. E. S. Bullock and D. C. Twichell, Silver City, N. M.
14 Pellagra in Childhood; Report of Case. F. C. Knowles, Philadelphia.
15 Borderland Between Medicine and Surgery in Relation to Chronic Prostatitis. J. R. Wiseman, Syracuse, N. Y.
16 Practical Observations Drawn from One Hundred and Sixty-One Cases of Hysterectomy. W. E. Darnall, Atlantic City, N. J.
17 Cerebral Edema (Wet Brain) in Chronic Alcoholism. C. E. Sceleth and A. F. Beifeld, Chicago.
18 Study of Two Hundred and Fifty Stained Blood Films in Pyorrhea Alveolaris. F. Hecker, Kansas City, Mo.

9. **Value of Certain Tests in Chronic Nephritis.**—The blood pressure determination, repeated urinary examinations and a study of the ability of the kidney to excrete extra sodium chlorid, in Frothingham's opinion, are the most reliable tests for making an early diagnosis of chronic nephritis. For prognosis in chronic nephritis the determination of the non-protein nitrogen in the blood, the excretion of phenolsulphonephthalein in the urine, and the ability to excrete extra nitrogen in the urine are the most useful tests.

11. **Immunity in Tuberculosis.**—The following points are emphasized by Baldwin: There is no natural immunity to tuberculosis in warm-blooded animals to the types of bacilli found in the bovine or human race. There is a considerable variation in resistance in some species, probably due to the chemical effect of their secretions or physiologic differences in the animals, but chiefly to the fact that the bacillus has not become adapted to long-continued parasitic existence in them. In the human species no natural immunity is found in any race. All uncivilized races long removed from infection are very susceptible, but the white races, especially the European Jews, have acquired a certain degree of immunity by inheritance and almost universal infection. The rapid increase of intercourse between all lands and races facilitates the universal spread of tuberculosis, which is certain to occur through the medium of numerous bacillus "carriers."

The ultimate survival of those who acquire a relative immunity will tend to diminish the severity of the disease, but many generations may be required to accomplish this. The opportunities for infection, now universal in cities, will diminish gradually in civilized lands, by lessening the danger from advanced cases, also from bovine sources. For many years, however, the number of "carriers" will increase owing to improved care, longer life and higher standards of living among the people. The best degree of resistance against tuberculosis that has been attained by experiments on the lower animals involves inoculation with living bacilli. This is of little value because of the short duration of the protection and the danger of sequestered bacilli. The natural infection of human beings takes place largely in childhood and increases the resistance to subsequent disease in a large measure. Under improved care of the tuberculous and better hygiene the amount and frequency of severe infections should diminish, while the number of those with slight, relatively harmless infections should relatively increase.

Adults withstand exogenous reinfection under extreme exposure, partly on account of slight infections in earlier life and favorable occupations, environment and nutrition. The specific immunity acquired from natural infection is largely due to cellular reactions of bacteriolytic nature, which take place outside the blood stream for the most part. The interaction between the ferments of the body cells and those of the bacillus lead to heightened activity of the lytic power, both lipolysis and proteolysis. The tuberculin sensitiveness or "allergy" is the chief indication of specific resistance. In the patient most of the inflammatory symptoms are due to the actively working immunity functions. In the therapy of tuberculosis this principle should be applied: To avoid interference with Nature's powers of resistance when she is attempting, with apparent success, to localize the infection.

American Journal of Public Health, Boston

May, V, No. 5, pp. 387-492

19 Place of Mouth Hygiene in Public Health Movement. W. G. Ebersole, Cleveland
20 Dental Clinics as Community Investment. E. F. Brown, New York.
21 Popular Education in Mouth Hygiene. M. J. Jones, Washington, D. C.
22 Importance of Mouth Hygiene to General Health. H. W. Wiley, Washington, D. C.
23 Smallpox Epidemic at Niagara Falls. L. R. Williams, New York.
24 Rural Sanitary Survey and What It Reveals. O. Dowling, New Orleans.
25 Statistics of Disease. J. W. Trask, U. S. P. H. Service.
26 Laboratory Methods in Diagnosis of Typhus. J. F. Anderson, Washington, D.C.
27 Sanitary Control of Shellfish Industries. C. Bates, Washington, D. C.

American Journal of Roentgenology, Detroit

February, II, No. 4, pp. 633-673

28 Modification of Occipitofrontal Position in Roentgenology of Accessory Nasal Sinuses. C. A. Waters and C. W. Waldron, Baltimore.
29 Detection of Pure Cholesterin Gallstones by Roentgen Rays. L. G. Cole, New York.
30 Case of Diverticulitis of Sigmoid, with Roentgenologic Findings. R. D. Carman, Rochester, Minn.
31 Roentgen Demonstration of Multiple Diverticula of Colon. J. T. Case, Battle Creek.

American Journal of Tropical Diseases and Preventive Medicine, New Orleans

May, II, No. 11, pp. 677-734

32 Craigiasis; Report of Cases. N. Barlow, Cuyamel, Honduras.
33 Examination of Arriving Aliens for Uncinariasis at Honolulu. C. M. Fauntleroy, Honolulu.
34 Methods of Investigating Biology of Spirochetes. H. B. Fantham.

Annals of Otology, Rhinology and Laryngology, St. Louis

March, XXIV, No. 1, pp. 1-192

35 Systemic Infection of Middle Ear in Exanthemata. C. R. C. Borden, Boston.
36 Aching Throat. G. H. Makuen, Philadelphia.
37 Vaccine Therapy in Diseases of Ear. W. Haughey, Battle Creek, Mich.
38 Meningitic Suppurative Extradural Abscess of Posterior Fossa of Skull After Purulent Tonsillitis. O. Beck, Vienna.
39 Double Mastoiditis; Pure Culture of Streptococcus Capsulatus Mucosus from Mastoid Cells of Both Ears. W. D. Jones, Dallas, Tex.
40 Modern Mastoid Operation. J. J. Kyle, Los Angeles.
41 Hemorrhage Following Removal of Faucial Tonsil. F. F. Agnew, Independence, Ia.
42 Two Cases of Foreign Body Imbedded in Wall of Pharynx. C. N. Cox, Brooklyn.
43 Twenty-Five Cases of Vincent's Angina Successfully Treated with Sodium Perborate. H. H. Stark, El Paso, Tex.
44 Operation of Choice in Maxillary Sinus Diseases. G. P. Marquis, Chicago.
45 Difficulties of Closing Perforation of Drum Membrane in Certain Cases of Acute Suppurative Otitis Media. G. Bacon, New York.
46 Operative Treatment of Cleft Palate. J. E. MacKenty, New York.
47 Diseases of Salivary Ducts. C. E. Munger, Waterbury, Conn.
48 Artificial Ear. S. H. Brown, Philadelphia.
49 Harmless Postoperative Temperature. G. F. Cott, Buffalo.

Archives of Diagnosis, New York

April, VIII, No. 2, pp. 101-200

50 *Pathology and Diagnosis of So-Called Diabetic Gangrene. L. Buerger, New York.
51 *Diagnosis of Abnormalities of Myocardial Function. T. S. Hart, New York.
52 *Simple Substitute for Wassermann Reaction. G. A. Stephens, Swansea, England.
53 Facts and Fallacies Connected with Clinical Pathology of Acetone Bodies. H. Stern, New York.
54 Ketones of Enterogenous Formation. H. Stern, New York.
55 Acidosis. W. D. Ludlum, Brooklyn.
56 Clinical Study of Case of Acidosis. G. F. Little, Brooklyn.
57 Essential Points in Diagnosis of Gastric Ulcer. F. Smithies, Chicago.
58 Diagnosis and Classification of Difficult Feeding Cases After First Year. G. R. Pisek, New York.
59 *Tubercle Bacilli in Stomach Contents. I. H. Levy and J. L. Kantor, Syracuse.
60 Auscultation at Acromion Process. R. Abrahams, New York.
61 Acromial Auscultation in Diagnosis of Incipient Apical Tuberculosis. N. Magida, New York.
62 Ear Complications in Influenza. H. Hays, New York.
63 Periodic Physical Examinations. J. M. Taylor, Philadelphia.

50. **Diagnosis of So-Called Diabetic Gangrene.**—For purposes of clinical diagnosis, prognosis and for a correct understanding of the pathology of the various conditions complicated with gangrene of the lower extremities, Buerger says, it is expedient to classify the cases into two large groups, those in which the trophic lesions depend on organic disease of arteries or veins, and those in which the nutrient vessels are intact. Pathologic studies have led us to the opinion that one large group of cases designated as thrombo-angeitis obliterans must be separated from a second large group atherosclerotic or arteriosclerotic disease, because the pathologic lesions are distinctive in each group. In the latter group belong the cases of so-called diabetic gangrene, as well as the "senile" and some of the presenile cases. From the clinical standpoint, a classification in which vasomotor cases, including Raynaud's disease, erythromelalgia, etc., are recognized as being independent of organic arterial disease, and in which thrombo-angeitis and arteriosclerotic gangrene are conceded to be distinct entities associated with characteristic and extensive vascular disease, will give the best opportunity for correct diagnosis.

51. **Abnormalities of Myocardial Function.**—The clinical significance and prognosis of the accelerated heart, Hart states, depend on the underlying condition, and to determine this, the responsibility of excessive outside demands, lack of balance between the elements of the nerve regulatory mechanism and defects of the myocardium, must be correctly apportioned. In general, one may say that excessive outside demands and unbalanced nerve control acting on a heart with its myocardium intact, are usually more readily corrected, and hence of less serious import to the patient, than when the heart acceleration depends on an intrinsic defect of the myocardium. But even a normal myocardium may be worn out by the excessive activity induced by extracardial conditions, and a defective myocardium properly handled may recover full functional efficiency.

52. **Substitute for Wassermann Reaction.**—The test is carried out by Stephens as follows: Clean the lobule of the ear with petrol, prick it and draw off a sufficiency of blood in a hemocytometer pipet, that is, up to the half mark and fill up to the remainder of the pipet with a 12 per cent. solution of pure ammonium chlorid in distilled water. The blood and solution should be thoroughly mixed, and at once examined under the microscope. Any delay is dangerous, for evaporation takes place, and the ammonium chlorid crystallizes out very readily and spoils the test. Examined in this way, the red corpuscles show a marked change, for in healthy blood the darker center tends to contract or crinkle up into an irregular mass, whereas in syphilitic blood the darker center tends to expand in some cases out toward the circumference of the corpuscle.

59. **Tubercle Bacilli in Stomach Contents.**—Tubercle bacilli have been demonstrated by Levy and Kantor in the stomach contents of three patients suffering from pulmonary tuberculosis. They believe that in cases in which expectorated sputum is unavailable a certain number of positive diagnoses of pulmonary tuberculosis can be made with the aid of the stomach tube, and that an early positive diagnosis of pulmonary tuberculosis can be made more frequently by the gastroenterologist, should he adopt the custom of searching the fasting contents for tubercle bacilli in all the patients suspected of suffering from the dyspepsia of phthisis.

Archives of Internal Medicine, Chicago

June, XV, No. 6, pp. 945-1084

64 Variations in Toxicity of Chloroform for Anesthesia. **W. Hale,** Boston.

65 *Relation of Purgative Action of Magnesium Sulphate to Peristalsis and General Law of Crossed Innervation. S. J. Meltzer, New York.

66 *Renal Function; Nonprotein Nitrogen and Sugar Concentration in Blood, Phenolsulphonephthalein Elimination and Blood Pressure. A. H. Hopkins and L. Jonas, Philadelphia.

67 *General and Localized Effects of Intravenous Injections of Colloidal Copper and Casein in Cases of Human Cancer. C. B. McClurg, W. O. Sweet, H. N. Lyon, M. S. Fleisher and L. Loeb, St. Louis.

68 Rat-Bite Fever. B. B. Crohn, New York.

69 Factors Involved in Cases of Pleural Fluid Associated with Normal or Increased Vocal Resonance. C. M. Montgomery and E. A. Eckhardt, Philadelphia.

70 *Relation of Uric Acid to Gouty Attacks. A. L. Daniels, Madison, Wis., and F. H. McCrudden, Boston.

71 Effect of Theobromin Sodium Salicylate in Acute Chromate Nephritis. J. P. O'Hare, Boston.

72 Certain Aspects of Biologic Oxidation. **A. S. Loevenhart,** Madison, Wis.

73 *Urobilin in Stool—Index to Blood Destruction. O. H. Robertson, Boston.

74 Effect of Repeated Injections of Foreign Protein on Heart Muscle. W. T. Longcope, New York.

65. Abstracted in THE JOURNAL, May 30, 1914, p. 1747.

66. **Studies in Renal Function.**—The authors summarize the results of their study as follows: 1. Protein feeding in nephritis has a direct influence on the retention of nitrogen in the blood. This is most pronounced in the pure chronic interstitial type with hypertension. 2. The estimation of retention by blood analysis is of definite clinical value from the point of view of therapy, and though this series is too limited to permit of definite conclusions with regard to its prognostic value, our findings so far confirm those of other workers who advocate its usefulness in this field. 3. Chronic passive congestion does not cause an increase of waste nitrogenous products in the blood. 4. In the presence of nitrogen retention, the phenolsulphonephthalein output is usually low and the blood pressure frequently high. 5. Chronic passive congestion may greatly impair the phenolsulphonephthalein output. Variation in the elimination of this dye may also be noted in different stages of nephritis, and in cases with "hypermeability." 6. To be of value, the nitrogen retention and phenolsulphonephthalein tests should be repeated at intervals, the value of the former being increased when combined with clinical observations of the patient, diet, etc. 7. A slight hyperglycemia occurs in many high-pressure nephritics and frequently in those with retention of nitrogen and impaired phenolsulphonephthalein elimination.

67. **Effects of Intravenous Injections of Colloidal Copper in Cancer.**—Briefly, the findings of the authors are the following: Intravenous injections of colloidal copper have a definite effect in a certain number of tumors, while in the case of others they are without any noticeable effect. While in some tumors the measurable reduction in size, the shrinking of the ulcerated area, leaves no doubt about the definite effect of the injections on the tumor, there are a number of cases in which a noticeable shrinking of the tumor takes place, but in which the character of the tumors and the rapid effect of the injections suggest that the diminution in size is mainly due to an effect on the circulatory conditions in the tumor. Microscopic examinations of pieces of tumor excised during different periods of the treatment do not indicate a direct destruction of the tumor. While intravenous injections of colloidal copper have a definite effect, causing a partial retrogression in a certain number of cases, ordinary injections of casein preparations were even without effect or were followed by so slight effects that the distinct efficacy which can to a limited extent be ascribed to colloidal copper cannot be attributed to casein. In case injections of casein have an unusually marked general effect, causing high fever extending over several days, combined with other severe symptoms, they may cause a partial destruction of the tumor within the next few days following the injection. This partial destruction may result in a localized process of healing. The local reactions around the tumor following the intravenous injections of various substances are in no way specific. Intravenous injections of colloidal copper and casein cause, in and around the tumors, changes which might be characterized as a localized experimentally produced inflammation called forth at a place distinct from the place of injection through substances introduced into the general circulation. Colloidal copper and casein produce essentially the same "inflammatory" reaction, only after casein the reactions are usually more severe.

Three periods can be distinguished in most cases so far, as the character and intensity of the local reaction is concerned. In the first period all the inflammatory signs are most pronounced. The second period is characterized by a

marked decrease in inflammatory reactions. In cases in which the injections lead to an improvement in the conditions of the patients, the healing changes usually set in with the second period; the second period represents a reaction against the first period. The third period is the period of more or less marked immunity against the effects of the injections. Just as in the case of the general reactions, so also in the case of the local reactions, an immunity usually becomes established, which in this case likewise is usually not complete. In a similar manner as in the case of the general reactions, casein immunizes also against the local effects of colloidal copper, while, on the other hand, injections of colloidal copper do not immunize against the effects of casein. While a certain connection between the local reactions and the healing processes seems to exist, the parallelism is not a complete one, probably owing to the interference of other variable factors. The authors suggest that it is possible—and they regard this as entirely tentative—that the reaction against the acute inflammatory changes of the first period, a reaction which characterizes the second period and which leads to a diminution in the size of the tumor and its neighborhood mainly through the circulatory changes, constitute the essential effect of the injections of colloidal copper, and that in some special cases this change is followed by further healing processes, either by a more marked shrinking of the tumor or by a healing over of the carcinomatous ulcer. Whether an actual destruction of tumor tissue takes place directly or indirectly as the result of the injections, can neither be positively asserted nor denied at present.

70. **Relation of Uric Acid to Gouty Attacks.**—The work recorded in this paper is the result of an attempt to find if there is any relation between attacks of gout and the amount of uric acid in the blood, or between such attacks and the amount of uric acid excreted in twenty-four hours. The investigation was carried out by Daniels and McCrudden on two women, both of whom gave typical histories of gout, and on roentgenoscopy showed bony changes—Bruce's nodes—characteristic of gout. These were not cases of atrophic arthritis, hypertrophic arthritis or infectious arthritis, but cases of real gout. Throughout the investigation the patients were kept on an approximately constant, purin-free diet. The work showed that there was no more uric acid in the blood than in blood of normal individuals. The amount of uric acid in the blood was not altered during acute attacks of gout. Uric acid excretion was not altered during acute attacks of gout. Attacks of gout appeared during atophan administration, when, as shown by chemical analysis, the uric acid content of the blood had been greatly decreased.

73. **Urobilin in Stool.**—An increased quantity of urobilin in the stool was found constantly by Robertson in eleven cases of pernicious anemia (except during remission); also in congenital hemolytic jaundice, malaria, and in one case of secondary anemia with a regenerative type of blood. All these cases showed clinical evidence of increased blood destruction. Cases of leukemia, secondary anemia, chronic passive congestion, pneumonia with jaundice, and diseases of the liver, all showed a urobilin output within the limits found in normal individuals. Those patients in whom the evidence of blood destruction was most marked, gave the highest urobilin estimations. There was no case with a normal urobilin output which showed any evidence of abnormal hemolytic activity. In view of the consistency of the foregoing results, Robertson thinks, it seems fair to conclude, first, that the quantity of urobilin in the stool may be taken as an approximate measure of the degree of hemolysis occurring in the body, and second, that such estimation is of very definite clinical value in the diagnosis of conditions questionably hemolytic in character, particularly in anemias of uncertain type.

Archives of Pediatrics, New York

May, XXXII, No. 5, pp. 321-400

75 *Hypertrophy of Thymus and Thymus Death; Report of Cases. T. Le Boutillier, Philadelphia.

75. **Hypertrophy of Thymus and Thymus Death.**—Le Boutillier urges that no infant or young child should come under observation without a most thorough and careful examination of the chest in the region of the thymus gland, to determine if there is an enlargement of this gland. This is especially true in children who have slight or marked dyspnea or cyanosis which cannot be traced to any other condition. In any case in which the diagnosis is not absolute, the child should be roentgenographed. The author feels sure that in many instances there is a more or less sudden engorgement of the thymus gland due to some derangement in the general arterial system which may in some cases be great enough to cause death; that tracheostenosis is a positive condition and that death is caused by it in certain cases; that the importance of enlarged thymus in goiter must not be overlooked.

Boston Medical and Surgical Journal

June 3, CLXXII, No. 22, pp. 807-842

76 Late Results of Surgical Treatment for Flexed Scapulae. H. W. Marshall, Boston.
77 Program and Directions for Mental Examination of Asocial, Psychopathic and Doubtful Subjects. (To be Continued.) R. S. Hardwick, Boston.
78 Urethral Caruncle. E. L. Young, Jr., Boston.
79 Cutaneous Tuberculosis. Case of Folliclis and Erythema Induratum. J. H. Bufford and C. G. Lane, Boston.

June 10, No. 23, pp. 843-880

80 Some Perplexities in Modern Medicine. E. A. Bates, Springfield.
81 Relation of Bacteria to Etiology of Summer Diarrhea in Young Children. A. I. Kendall, Chicago.
82 *Clinical Use of Water Meal in Determining Secretory and Motile Powers of Stomach. A. E. Austin, Boston.
83 Posterior Gastro-Enterostomy by Exact Measure. M. P. Smithwick, Boston.
84 Program and Directions for Mental Examination of Asocial, Psychopathic and Doubtful Subjects. (To be Continued.) R. S. Hardwick, Boston.
85 Suggestion in Treatment of Hemorrhagic Disease of New-Born. J. C. Hubbard, Boston.

June 17, No. 24, pp. 881-924

86 Anatomic and Mechanistic Conception of Disease. J. E. Goldthwait, Boston.
87 Syphilis and Lung Disease. A. F. Downing, Cambridge.
88 Rabies in China. A. C. Reed, Changsha, China.
89 Tuberculous Infection as Disease Entity. G. T. Palmer, Springfield, Ill.
90 Program and Directions for Mental Examination of Asocial, Psychopathic and Doubtful Subjects. R. S. Hardwick, Boston.

82. **Use of Water Meal in Determining Secretory and Motile Powers of Stomach.**—Based on experimental considerations, the clinical use of the water meal as advocated by Carlson and others has been made by Austin in the men's medical clinic at the Boston Dispensary, and in the gastro-intestinal clinic at Mt. Sinai Hospital. The custom was to ask a patient to take a meal, the evening before, of meat, potato, bread, butter, rice and raisins, and then come to the clinic the next morning fasting. There 350 c.c. of water were given the patient, the contents of the stomach being removed twenty minutes later, the extreme limit at which these authors claim that the water given has left the stomach. The superficial advantages of this method are readily recognized; bread is not always available for the test breakfast, but water, of course, is. One can never rely on the time, if the patients are allowed to take their bread at home and then come to the clinic; while, if taken in the clinic, a wait of forty-five to sixty minutes is too long in a busy forenoon. Water, too, as remarked by the before-mentioned authors, allows one to see readily whether there is any residue left from the Riegel meal. This method, also, avoids a second introduction of the tube, which is necessary if one first attempts to find food remnants in the fasting stomach and then give the ordinary test breakfast. Lactic acid, blood and bile are also much more readily detected in the absence of a mass of partly digested food.

Cleveland Medical Journal

May, XIV, No. 5, pp. 333-406

91 Visceroptosis as Part of Neurologic Syndrome. W. Timme, New York.
92 Skeletal Remains of Primitive Man. N. W. Ingalls, Cleveland.
93 Some Effects of Harrison Antinarcotic Law in Cleveland. H. H. Drysdale, Cleveland.
94 Historical Statistical Review of Tuberculosis in Cleveland. G. E. Harmon and M. Carey, Cleveland.

Colorado Medicine, Denver

May, XII, No. 5, pp. 135-166

93 Megaduodenum. R. W. Corwin, Pueblo.
96 Acute Intestinal Obstruction. C. E. Tennant, Denver.
97 Some Affections of Eye from Undue Exposure to Light. W. L. Hess, Denver.
98 Colloidal Theory of Pathology of Glaucoma. J. A. McCaw, Denver.
99 Congenital Cysts of Neck. W. Senger, Pueblo.
100 Modern Pseudomedical Cults. C. Powell, Denver.
101 Extraction of Coin from Child's Esophagus. F. B. Stephenson, Marble.

Florida Medical Association Journal, Jacksonville

May, I, No. 11, pp. 321-352

102 Misdiagnosed Cases of Compression of Spinal Cord. T. A. Williams, Washington, D. C.
103 Larva Migrans. H. C. Dozier, Ocala.
104 Trachoma. F. P. Hoover, Jacksonville.
105 Treatment of Tuberculosis. D. C. Thompson, Pensacola.
106 Preventive Medicine. G. H. Benton, Miami.

Georgia Medical Association Journal, Augusta

May, V, No. 1, pp. 1-23

107 Hydrophobia (Rabies). C. B. Greer, Atlanta.
108 Transmission of Disease. K. R. Collins, Atlanta.
109 Facts—How We Can Use Them. A. G. Fort, Atlanta.

Journal of Cutaneous Diseases, New York

June, XXXIII, No. 6, pp. 437-508

110 Lichen Planus Atrophicus. D. W. Montgomery, San Francisco.
111 *Epidermolysis Bullosa Beginning in Adult Life; Acquired Form of Disease. F. Wise and M. F. Lautman, New York.
112 Multiple Benign Cystic Epithelioma; with Report of Four Cases. J. W. Miller, Cincinnati.
113 Metabolic Influence of Chlorids on Certain Dermatoses. M. L. Ravitch and S. A. Steinberg, Louisville.

111. Epidermolysis Bullosa Acquisita.—The case reported by Wise and Lautman represents an instance of a bullous dermatosis possessing the features common to the dystrophic type of epidermolysis bullosa hereditaria, but differing from the latter in being neither congenital nor hereditary and in showing no morbid alterations of the nails; and, further, in making its initial appearance in adult life. Clinically, the eruption is characterized by occurring chiefly on the extremities; by the incidence of vesicular and bullous lesions evoked solely by trauma; by the presence of numerous epidermis cysts; by the formation of areas of atrophic and cicatricial tissue at the sites of bullous lesions which had ruptured and undergone involution; and by the occurrence of bullous lesions on the buccal mucosa. Histologically, the most interesting feature in this case is the paucity of pathologic changes in the affected tissue, especially in connection with the elastic fibers, which are practically unaffected; other noteworthy features are the absence of marked alterations in the blood vessels and, finally, the disposition of the bulla, situated between epidermis and corium. The unaffected regions of the skin showed no changes to the naked eye or microscopically.

Journal-Lancet, Minneapolis

May 15, XXXV, No. 10, pp. 249-280

114 Corneoscleral Trephining; New Operation for Relief of Glaucoma. H. A. Beaudoux, St. Paul.
115 Pellagra; Report of Cases. G. S. Adams and F. V. Willhite, Yankton, S. D.
116 Substitute Operations for More Radical Surgical Work Advised by Lane in Intestinal Stasis. (To be continued.) A. E. Benjamin, Minneapolis.
117 Conservative Use of Lane's Plates in Treatment of Fractures. E. K. Green, Minneapolis.
118 Caisson Disease on Cuyuna Iron Range. R. J. Sewall, Crosby.

June 1, No. 11, pp. 281-306

119 Health Officer's Daily Mail; What It Suggests. O. Dowling, New Orleans.
120 *Substitute Operations for More Radical Surgical Work Advised by Lane in Intestinal Stasis. A. E. Benjamin, Minneapolis.
121 Splenectomy for Pernicious Anemia. A. T. Mann, Minneapolis.
122 Relation of Focal Infection to Systemic Disease. S. M. White, Minneapolis.

120. Operations for Radical Surgical Work in Intestinal Stasis.—The radical methods advised by Lane, namely, the ileosigmoidostomy or colectomy, in Benjamin's opinion, seem seldom justified, as, in the former operation there results a loaded and filled up, redundant and useless colon; and in the latter operation, numerous pronounced adhesions which ultimately can lead to the recurrence of stasis. And, furthermore, these operations, especially the latter, are followed by an unwarranted mortality rate. The relief of constricting bands and the reduction of unnecessary enlarged pockets, such as a dilated cecum, by means of the plication operation and the replacement of the prolapsed colon and stomach by the mechanical elevation and suturing of the gastrocolic omentum to the lateral peritoneum and to the median incision, and possibly the shortening of the gastrohepatic omentum, and even the elevation of the stomach by means of the Rovsing operation, Benjamin says, are simple, free from danger, and prevent the recurrence of these kinks, and favor the normal flow of fecal contents.

This treatment, followed by dietetic, mechanical and hygienic methods in the majority of cases, brings satisfactory results. In other more pronounced and suitable, well-selected cases, the operation of cecum sigmoidostomy would seem rational and possibly satisfactory, but further investigation, research and experiments should be followed up to determine whether this will be satisfactory to the patient, as well as to the surgeon.

Kansas Medical Society Journal, Topeka

May XV, No. 5, pp. 139-170

123 Vaccine Therapy. H. M. Conner, Topeka.
124 Case of Tubal Pregnancy. L. A. Clary, Hutchinson.
125 Parenteral Digestion; Its Relation to Infectious Diseases. (To be continued.) S. A. Matthews, Lawrence.

Lancet-Clinic, Cincinnati

May 22, CXIII, No. 21, pp. 561-588

126 Mortality and Morbidity of Appendicitis. F. F. Lawrence, Columbus.
127 Shortening of Round Ligaments by Transverse Suprapubic Incision. S. Stark, Cincinnati.
128 Empyema of Antrum Maxillare Treated by Phylacogen. C. H. Castle, Cincinnati.
129 Points of Diagnosis. E. W. Stevenson, Pittsburgh.
130 Manic-Depressive Episode Presenting a Frank Wish-Realization Construction. R. Reed, Cincinnati.

May 29, No. 22, pp. 589-616

131 Ligation of Common Iliac Artery for Iliofemoral Aneurysm; Report of Case. F. Fee, Cincinnati.
132 Chronic Progressive Chorea. E. W. Mitchell, Cincinnati.
133 Unsuspected Tuberculosis. T. Frazer, Asheville, N. C.
134 Incompetency of Ileocecal Valve Most Common Cause of Ileal Stasis. J. H. Kellogg, Battle Creek, Mich.
135 A Dream. E. Fennel, Cincinnati.

Medical Record, New York

June 12, LXXXVII, No. 24, pp. 967-1008

136 Studies of Pancreatic Secretion. M. Einhorn, New York.
137 Giving of Nauheim Baths in This Country. S. Baruch, New York.
138 Physicians Marcquis and Boudewyns of Antwerp. J. B. Stein, New York.
139 New Gas-Oxygen-Ether Apparatus. H. C. Luke, New York.
140 Infected Colon and Its Surgery. J. M. Lynch and J. W. Draper, New York.
141 Rational and Successful Treatment for Pulmonary Tuberculosis (Calcium Sulphid). A. H. Henderson.

June 19, No. 25, pp. 1009-1050

142 *Chronic Progressive Polyarthritis or Arthritis Deformans; Report of One Hundred and Five Cases. S. W. Boorstein, New York.
143 Medical Literature and Its Preparation. E. Mayer, New York.
144 Thyroglossal Cysts; Report of Case. C. B. Burke, Atlantic, Iowa.
145 Double Clubfoot in Twins. L. W. Ely, San Francisco.
146 Radium Therapeutics Otherwise Than for Malignancy. J. B. Bissell, New York.
147 Successful Use of Pituitary Gland by Ionization in Gonorrheal Arthritis. M. S. Macy, New York.
148 Diagnosis and Conservative Treatment of Inflammation of Accessory Sinuses of Nose. J. L. Mayhaum, New York.

142. Chronic Progressive Polyarthritis or Arthritis Deformans.—Boorstein is of the opinion that this disease has no relation at all to rheumatism and antirheumatics should be avoided. He says that the predominating cause is distinctly an infection either in the joint itself or at a distant point. The disease is not dangerous to life and is usually self-limiting, but it leads to marked deformities making the patient a cripple. Prophylaxis in preventing any systemic infection and keeping digestion and intestinal tract in good conditions is essential. Removal of chronic foci anywhere in the body is imperative as a prevention of progresssive ill-health. When the disease is present, the place of infection

should be sought for and the territory cleared, if possible. General treatment, such as good hygiene, good food, tonics and building up of the patient, is essential to success. Acute joints should be kept at rest. When the active symptoms subside, local treatment to the joints in the form of active and passive hyperemia, hydrotherapy, massage, active and passive exercises, should be administered regularly with great care and patience and kept up for a long time. The occurrence of deformities should be prevented by steadying the joints in proper position at the time of acute infection. When the deformities have already occurred they should be corrected.

Missouri State Medical Association Journal, St. Louis

June, XII, No. 6, pp. 249-298

149 Blood Pressure in Pregnancy and Labor. F. H. Raab, Kansas City.
150 Present Status of Color Blindness with Demonstration of New Test. J. E. Jennings, St. Louis.
151 Some Neuroretinal Conditions of Minor Gravity. D. C. Adcock, Warrensburg.
152 Blood Transfusion. F. Reder, St. Louis.
153 Otitic Sinus Thrombosis. C. F. Pfingsten, St. Louis.
154 Cases of Cerebrospinal Syphilis Treated with Salvarsanized Serum. L. Bartels, St. Louis.
155 Peptic Ulcer. O. L. Edwards, Roodhouse, Ill.
156 Laboratory Aid in Diagnosis of Gastric Ulcer. D. L. Penney, St. Louis.
157 Roentgen-Ray Aids in Diagnosis of Gastric Ulcer. F. B. Hall, St. Louis.
158 Surgical Treatment of Gastric Ulcer. H. S. McKay, St. Louis.
159 Summer Diarrheas of Children. A. C. Ames, Mountain Grove.
160 Operative Treatment of Chronic Dacryocystitis. C. W. Tocker, St. Louis.
161 Missouri State Hospital. R. H. Jesse, Columbia.

New Mexico Medical Journal, Las Cruces

May, XIV, No. 2, pp. 31-66

162 Pellagra in Rio Grande Valley. R. E. McBride, Las Cruces.
163 Pulmotor Demonstration. B. F. Stevens, El Paso, Tex.
164 Physician and Better Baby. M. G. Cartwright, Albuquerque.
165 Problems of Communicable Diseases in Southwest. T. C. Sexton, Las Cruces.
166 Bismuth Paste Poisoning; Report of Fatal Case. C. E. Yount, Prescott, Ariz.

New York Medical Journal

June 5, CI, No. 23, pp. 1141-1196

167 Cholelithiasis. B. Robinson, New York.
168 Intravenous Use of Antiseptics in Gonorrhea, W. F. Bernart, Chicago.
169 Prognostic Outlook in Mental Disease. M. J. Karpas, New York.
170 Secondary Carcinoma of Bone. Review of Literature and Report of Cases. A. A. Matthews, Spokane, Wash.
171 Roentgen-Therapy in Cancer. C. H. Archibald, New York.
172 Blindness of New-Born. H. P. de Forest, New York.
173 Treatment of Papilloma of Urinary Bladder. C. W. Shropshire and C. Watterston, Birmingham, Ala.
174 General Anesthetics. L. M. Jacobs, Philadelphia.
175 Future Lines of Progress in Child Hygiene Work. S. J. Baker, New York.

June 12, No. 24, pp. 1197-1248

176 Tuberculosis Problem and Section 1,142 of the Penal Code of State of New York. S. A. Knopf, New York.
177 Developmental Reconstruction of Colon. J. M. Lynch and J. W. Draper, New York.
178 Chronic Intestinal Stasis. G. R. Satterlee, New York.
179 Treatment of Erysipelas and Other Forms of Dermal and Epidermal Inflammation with Phenol and Alcohol. A. Judd, New York.
180 Pain. H. J. Hartz, Philadelphia.
181 Physiologic and Pathologic Changes in Endometrium. J. W. Warner, New York.
182 Persistent Cough Removed by Special Surgery. A. I. Schwartz, New York.
183 Scopolamin-Morphin-Cocain Anesthesia in Surgery. A. G. Brenizer, Charlotte, N. C.
184 Mucous Membrane in Fasting Stomach Content. E. A. Aronson, New York.
185 Hysteria as Constitutional Disorder. H. C. B. Alexander, Chicago.

June 19, No. 25, pp. 1249-1300

186 Alexia. S. P. Goodhart and H. Climenko, New York.
187 *Improved Method of Applying Bone Wedge Graft in Treatment of Clubfoot. R. E. Soule, New York.
188 Atrophy of Skin Associated with Cutaneous Syphilis; Report of Case. F. Wise, New York.
189 Treatment of Diarrhea. E. M. Sill, New York.
190 School Hygiene. J. B. Todd, Syracuse.
191 Disease of Esophagus. W. Lerche, St. Paul.
192 Mastoiditis. C. H. Smith, New York.
193 Lange's Colloidal Gold Test as Adjunct to Diagnosis of Cerebrospinal Affections. A. I. Rubenstone and M. Schwartz, Philadelphia.
194 Hemorrhagic Disease in Newly Born Treated by Horse Serum; Report of Four Cases. A. Hymanson, New York.
195 Hysteria as Constitutional Disorder. H. C. B. Alexander, Chicago.

187. Bone Wedge Graft in Treatment of Clubfoot.—The joint surfaces having been exposed from above, the articular cartilages on the astralagus and scaphoid are removed. Next triangular segments of bone are removed from the head of the astralagus and from the corresponding opposite surface of the scaphoid to admit a wedge-shaped segment of bone secured from the antero-internal surface of the tibia, and after forcing the foot into its corrected position the graft is slid into position from above downward. The fore foot then released fixes the graft securely in position without necessity of sutures.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Children's Diseases, London

June, XII, No. 138, pp. 161-192

1 *Ovarian Sarcomata in Children; Report of Three Cases. T. T. Higgins.
2 Case of Atonic Form of Cerebral Diplegia. E. G. Fearnsides.
3 Case of Tuberculosis of Auditory Apparatus; Internal Hydrocephalus; Permanent Drainage of Lateral Ventricle. C. E. West.
4 Sex Distribution of Rickets. J. Priestley.

1. Ovarian Sarcomata in Children.—The three cases here recorded by Higgins illustrate certain aspects of the disease, namely, the insidious onset, with unexplained colicky pain, later the appearance of a mobile lump, with possibly some precocious menstruation, the steady enlargement of the abdomen, with pain and fever, the result of an adhesive peritonitis occurring on the surface of the growth, and finally the tendency to spread by direct extension along lines of adhesion rather than by metastases. The patients were 5, 10 and 7 years of age, respectively.

British Medical Journal, London

May 29, I, No. 2839, pp. 917-956

5 Care of Health of Married Women Missionaries. M. Scharlieb.
6 *Traumatism and Tuberculosis. T. Oliver.
7 Carrier of Yellow Fever. A. E. Shipley.
8 *Case of Banti's Disease With Enlarged Hemolymph Glands. J. R. Collins and G. W. Riddel.
9 Exophthalmic Goiter. H. M. Gurney.
10 *Cause of Appendicitis. B. Hughes.
11 Two Cases of Diaphragmatic Stab Wound. C. J. Smith.
12 Method for Bacteriologic Examination of Nasopharynx in Epidemic Cerebrospinal Meningitis Contacts. W. H. Fearis.

June 5, No. 2840, pp. 957-992

13 Irregular Action of Heart. C. Wilson.
14 Some Factors Concerning Amputations With Reference to Present War. P. Lockhart-Mummery.
15 Case of Acute Aneurysm of Superior Mesenteric Artery, With Rupture. J. M. Cotterill and J. Miller.
16 Suffocation by Poisonous Gases, Detailed Notes on One Fatal Case. A. W. Hendry and E. L. Horsburgh.
17 Aneurysmal Varix of Popliteal Vessels from Gunshot Wound. R. B. Wright.
18 Anglo-French Hospital, No. 2, Chateau Tourlaville, Cherbourg. M. L. Ramsay and F. A. Stoney.

6. Traumatism and Tuberculosis.—The relationship of traumatism and tuberculosis is expressed thus by Oliver: Tuberculosis develops in a person who, until the accident, was believed to be quite healthy; a latent tuberculosis is roused into activity by the accident; a tuberculous lesion becomes localized at the site of injury, the micro-organisms having been carried thither from a focus elsewhere in the body, or injury has simply aggravated a localized lesion which was previously present. Although there is no tuberculosis without the tubercle bacillus, the part played by the condition of the body, as exemplified in general and local resistance, cannot be ignored, and it is here that injury, by reducing resistance, comes in as a possible factor in the development of the disease. Oliver cites several cases to support these views.

8. Banti's Disease with Enlarged Hemolymph Glands.—In the case recorded by Collins and Riddel the lymphatic glands in the abdomen had undergone a hyperplasia of their

histologic elements similar to what occurred in the spleen. Blood was present in the lymph sinuses of these lymphatic glands to a variable extent, but the amount of blood present bore no relation to the hypertrophy of the endothelial cells or fibrous tissue of the glands. The hemorrhage into the mesentery and the blood in the ascitic fluid suggested that the blood corpuscles in the sinuses of the lymph glands had been transferred from thence via the ordinary lymph paths. It seemed, however, more probable to the authors that these hemolymph glands represent blood organs *sui generis* in which the same pathologic changes had occurred as in the other blood organ, the spleen, than that the great hyperplasia of the endothelial cells and fibrous tissue was simply the result of the presence of red corpuscles in the lymph paths of normal lymphatic glands. A small angioma was present on the anterior surface of the liver. Areas of fibrosis and collections of small round cells were present about the portal system and to a less extent in the intercellular tissue. A certain amount of fatty infiltration was present, more marked near the angioma. The capillaries were distended with blood. The pancreas appeared perfectly normal. The sections of the lungs showed the presence of emphysema. A section was made through the origin of the portal vein at the junction of the mesenteric and splenic veins, as the site most likely to be diseased. The walls of the vein were quite healthy. A portion of the splenic artery exhibited early atheroma. Sections of the suprarenal glands exhibited no abnormality. The kidneys exhibited the histologic changes of chronic interstitial nephritis, the left kidney being considerably more fibrosed than the right.

10. **Cause of Appendicitis.**—It is suggested by Hughes that all cases of appendicitis are in the first place due to a mechanical cause and this consists in a rotation of the organ about its meso-appendix. He considers the acute inflammatory process, whether it go on to abscess formation or not, to be purely secondary to this rotation. This is assumed for the following reasons: (*a*) The valve of Gerlach is by no means a reliable valve. (*b*) In almost all quiescent appendices, which have never given rise to any symptoms and which have been removed during pelvic operations, Hughes has always been able to culture intestinal organisms from their cavities—that is, the normal contents of the appendix are not sterile. The chief factors which bring this rotation about are: (*a*) a movable loaded cecum; (*b*) loss of tone in the abdominal muscles. The most important is the second of these two factors, for on it in some measure depends the first. He believes that if people took regular exercise and kept their abdominal muscles in good trim, if people in sedentary occupations would resort to physical exercises designed to keep up the tone of their abdominal muscles, and if there were less conveniences for those who can walk, there would be less appendicitis.

Journal of Pathology and Bacteriology, London

April, XIX, No. 4, pp. 455-554

19 *Neuroblastoma and Ganglioneuroma of Suprarenal Body. J. S. Dunn.
20 Lipoids of Ancient Egyptian Brains and Nature of Cholesteryl Esters. A. Lapworth and F. A. Royle.
21 Streptococcus Mucosus—Its Capsule and Its Pathogenic Properties. W. L. Holman.
22 Banana Debris in Feces Simulating Tapeworm Segments. E. Emrys-Roberts and J. W. W. Stephens.
23 Filterability of Bacillus Bronchisepticus; With Argument for Uniform Method of Filtration. N. S. Terry.
24 *Nucleus of Neutrophil Polymorphonuclear Leukocyte in Health and Disease. W. E. Cooke.
25 *Blood Platelets in Health and Disease. L. Dimond.
26 Composition of Tissue Fluid in Normal and Nephritic Animals. A. E. Boycott and J. S. C. Douglas.

19. **Ganglioneuroma of Suprarenal Body.**—The case from which the neuroblastoma was obtained by Dunn was that of a boy, aged 14, who died after an illness of three months' duration characterized by wasting, pain in the back, ascites and great enlargement of the liver. At the postmortem examination a large oval tumor measuring 15 cm. in length, 10 cm. in breadth and 7 cm. in thickness, was found occupying the site of the right suprarenal body. The tumor had a thin capsule; it had pressed down the kidney, and was lightly adherent to the capsule of that organ, but it showed no tendency to invade surrounding structures. On closer inspection, the outline of the anterior surface of the right suprarenal body could be traced on the anterior surface of the tumor; this organ had obviously been much stretched and flattened out by the growth behind, so that its lower margin measured 9 cm. in length and its height 7 cm. On section, the substance of the tumor was seen to be to a great extent hemorrhagic; the better preserved portions were of greyish-pink color. Two large pseudocysts measuring 7 cm. and 5 cm. in diameter and filled with hemorrhagic débris were present in the upper part. The liver was enormously enlarged, weighing 7,290 gm.; it had a smooth surface and broadly rounded margins, the general shape of the organ suggesting that the capsule had been greatly overdistended. On section the liver tissue appeared to have been almost entirely replaced by greyish tumor tissue; there was no appearance of separate nodules, but rather diffuse infiltration, and only small strands of liver tissue could be recognized here and there.

Extensive metastatic deposits were present in the retroperitoneal and posterior mediastinal lymphatic glands, and in the deep cervical groups on both sides, especially the left. No metastases were found in the lungs, heart, spleen, kidneys or other viscera, nor in any of the bones. The left suprarenal body presented normal appearances. Histologic examination of the well-preserved portions of the suprarenal tumor showed a peculiar and characteristic structure. The tissue was composed of very small round cells, rather larger than lymphocytes with darkly staining nuclei and almost no protoplasm; these were accompanied by varying amounts of fibrillar material. The patient who had the ganglioneuroma of the suprarenal was 4½ years of age, and was suffering from general symptoms, weakness, pallor and loss of weight, of a month's duration. Slight jaundice was present.

24. **Nucleus of Polymorphonuclear Leukocyte.**—The nucleus of the polymorph of normal blood Cooke found presents a sharply defined outline. It does not stain uniformly, but shows irregularities, due to the uneven distribution of the chromatin through the lining meshwork. Many of these depressions contain no chromatin at all. The nucleus in acute infections has a very different appearance. The outline is blurred or hazy, the mottled appearance of the normal nucleus is replaced by a densely and evenly staining mass of chromatin. In some, fine radiations of chromatin into the cytoplasm may be seen, or there may be coarser branches of nuclear material jutting out into the cell body. In many cases, too, there is a distinct increase in the size of the nucleus as compared with the normal. In the majority of cases of acute infection, there is a leukocytosis. This also means an increase in the chromatin content of the blood.

Cooke emphasizes the fact that nuclear activity must be looked on as being evidence of the performance of very definite functions, the nature of which is determined by the immediate necessities of the organ of which that nucleus forms a part, therefore, it is reasonable to suppose, considering the intimate connection that exists between the nuclear changes in the polymorph and the presence of bacterial toxins, that the polymorph plays an important part in the production of antibodies, necessary to successfully combat microbic invasion. The polymorph nucleus assumes, then, a prominent position in the production of active immunity. After many infections immunity remains long after antibodies have disappeared from the serum. Having seen the active part the polymorph takes in these diseases, it may be assumed that the continuance of the immunity depends on some faculty derived by previous education, existing in the polymorph or its parent cell.

25. **Blood Platelets in Health and Disease.**—The blood platelets are classified by Dimond in the following groups, and he suggests that differential counts in a variety of diseases promise to be of the greatest utility in diagnosis. 1. Platelet with central nuclear body, completely surrounded by protoplasm. The nucleus, which is round, oval, or irregular, may be eccentric. The protoplasmic mass is usually

round, and possesses no processes. 2. Platelet with central nuclear body surrounded by protoplasm, from which arise from one to seven or more flagella. 3. Fan platelets: (*a*) To the nuclear body there is loosely attached a circular or semicircular mass of protoplasm. (*b*) To the nuclear body are attached two fans. (*c*) To the nuclear body are attached three or more fans. 4. Ring platelets: (*a*) To the nuclear body is attached a single loop or ring of protoplasm. (*b*) To the nuclear body two rings or loops are attached. (*c*) to the nuclear body three or more rings are attached. 5. Combined fan and ring platelets: (*a*) To the nuclear body one fan and one ring are attached. (*b*) One fan and two rings are attached to nucleus. (*c*) Two fans and one ring are attached to nucleus. (*d*) Two rings or more and two fans or more, are attached to the nuclear body. 6. Platelets with nuclei body alone, no protoplasm and no flagella. It is common for this type of platelet to have one or more of its corpuscles attached to the nucleus by means of a short stem like a drum-stick. 7. Platelets with nuclear body and with one to seven or more flagella as the only representatives of the protoplasm. 8. Irregular and transitional forms of platelets. Differential counts of the azurophile corpuscles of the platelets give characteristic number in different diseases.

Lancet, London

May 29, I, No. 4787, pp. 1113-1166

27 Influence of Arboreal Habit in Evolution of Reproductive System. F. W. Jones.
28 *Pulsus Alternans in Some of Its Clinical Aspects. C. O. Hawthorne.
29 *Some Aspects of Ciliary Body in Health and Disease. H. P. Dunn.
30 Fracture of Pelvis with Extraperitoneal Rupture of Bladder. A. E. Blackburn and W. W. Cook.
31 Hypertrichosis in Insane. C. T. Ewart.
32 Use of Atropin in Treatment of Those Suffering from Effects of Irritant and Other Gases. D. V. Cow.

June 5, No. 4788, pp. 1167-1216

33 Arteriosclerosis. W. L. Blight.
34 Rheumatic Fever and Rheumatoid Arthritis. J. T. Clarke.
35 Case of Landry's Paralysis. J. S. B. Stopford.
36 Genesis of Constitutional Gastroptosis. J. J. Grace and W. Overend.
37 *Some Points in Circulatory System in Ankylostomiasis. A. E. A. Ismail.
38 Six Months With Bearer Division of Field Ambulance at Front. S. J. A. H. Walshe.

28. **Pulsus Alternans in Its Clinical Aspects.**—Hawthorne directs attention to the fact that a pulsus alternans which may escape the finger and the stethoscope, and perhaps also the pulse tracing may be rendered evident and even conspicuous by the combined use of the sphygmometer and the sphygmograph. If, while a radial tracing is being taken, more or less pressure is exercised on the brachial artery, the distinctive features of pulsus alternans come out very conspicuously. The difference between the height of the alternate waves is most decided when the sphygmometer pressure is at a moderate level, it is somewhat less decided as the pressure is increased, but it can still be appreciated even when the pressure is carried near to the obliterating point.

29. **Ciliary Body in Health and Disease.**—Dunn lays stress on hypothyroidism as a causative factor in cases of iridocyclitis and on the usefulness, clinically, of its recognition. That the ciliary body, so sensitive to toxemic influence, should readily respond to thyroid treatment is a natural sequence to the vascularity of its structure. Thus is placed in the hands of the ophthalmic surgeon a means of relief, yielding results which can be obtained in no other way. The dose of the extract employed by Dunn for children beyond 5 years of age and for adults is 3 grains twice daily, and from this dosage he has never seen any ill effects.

37. **Circulatory System in Ankylostomiasis.**—Ismail's hypothesis as to the origin of heart murmurs in these cases is this: The contraction of the papillary muscles, if continued further, will increase the convexity of the auricular surface of the flaps, which would be supported by the column of blood in the ventricle; further contraction would pull the valve edges into the ventricle, the latter at the same time separating. The chorda tendinea from each papillary muscle to both valves tend to prevent undue separation. The origin of the papillary muscles from the anterior and posterior walls, the two contractile walls of the left ventricle may be a means of regulating their action according to the degree of distention and integrity of the muscle. A chink would be created between the valves—some blood would regurgitate, the overtension in the ventricle released, and possibly a more efficient contraction continued, but a murmur systolic in time results.

Sei-I-Kwai Medical Journal, Tokyo

May, XXXIV, No. 5, pp. 27-31

39 Two Cases of Tubercular Bronchial Glands Breaking Into Trachea. I. Uyeda and Y. Takaki.
40 Case of Severe Abdominal Pain Cured by Vomiting of One Ascaris Lumbricoides. M. Nagahama.
41 *Intestinal Obstruction Caused by Ascaris Lumbricoides. Y. Takaki.
42 Eight Cases of Floating Kidney and Results of Abdominal Belt Treatment. U. Seo.

41. **Intestinal Obstruction Caused by Ascaris Lumbricoides.**—Takaki's patient was a child 3 years of age, which presented all the symptoms of an acute intestinal obstruction. Three days after the onset of the illness the patient vomited two ascarides, and in the course of the next six days 115 ascarides were vomited. The patient's appetite improved with the passing of the ascarides and he left the hospital on the eighth day of the disease completely cured.

Bulletin de l'Académie de Médecine, Paris

May 11, LXXIII, No. 19, pp. 559-586

43 *White Patch on Buccal Mucosa Sign of Syphilis. L. Landouzy.
44 *Conservative Secondary Amputations. A. Routier.
45 Electrovibration as Aid in Localizing and Extracting Foreign Bodies. J. Bergonié.
46 To Protect Against Inhalation of Gases and Dust. (Respirateur à ouate contre les gaz et les poussières.) H. Henrot.
47 Effect of Asphyxiating Gases in War; Necropsy in One Case. R. D. de la Rivière and J. Leclercq.
48 Hot Air in Treatment of Frost-Bite. A. Chenal and others.
49 Serotherapy of Wounds. (Résultats obtenus par l'emploi du sérum spécifique polyvalent de Leclainche et Vallée.) O. Pasteau.
50 Food Value of Organic Matter of the Bones. (Osseine, substance alimentaire.) E. Maurin.

43. Summarized June 26, Abstract 24, p. 2171.

44. **Secondary Amputations.**—Routier calls attention to the disastrous outcome of some cases in which he amputated in sound tissue, three weeks after the men had been wounded, and hospital gangrene developed, requiring most strenuous efforts for four months before recovery was complete. In some more recent cases with the same kind of injury, a bullet or shell wound of the knee, he decided to utilize the local reaction of the tissues to the suppuration as a means to ward off infection. Consequently, he made the incision through the soft parts in the focus of suppuration itself. The skin flaps thus obtained were turned back and the femur amputated as high up as it could be reached from below. The three skin flaps were thus lined with the granulations of the purulent focus, and this inner surface was sterilized with a strong hot solution of phenol, and all the surfaces were vigorously rubbed. By this means the layer of granulations thus served to protect against new infection, and the results surpassed all expectations.

Journal d'Urologie, Paris

August, 1914, VI, No. 2, pp. 153-296. Last indexed Aug. 29, p. 810

51 Urologic Instruments Invented in France. O. Pasteau.
52 Comparative Anatomy, Development and Histogenesis of External Genital Organs. E. Retterer. (To be Continued.)
53 *Serodiagnosis of Tuberculous Nature of Certain Cases of Acute Nephritis in Children, Supposed to be Primary. R. Debré and J. Paraf.
54 The Addresses at the International Urologic Congress, Berlin, June, 1914. F. Legueu, Casper, Verhoogen and others. Commenced in No. 1.

53. **Infectious Acute Nephritis.**—Debré and Paraf describe four cases of acute, apparently primary nephritis in children with sudden stormy onset, convulsions, amblyopia and coma in one case; acute pulmonary edema in the second, and hematuria and fever in the others. All had considerable edema, with retention of chlorids, but not of nitrogen. In all the symptoms subsided in less than two weeks and there

were no clinical toxic or infectious antecedents to explain the sudden kidney storm. The complement-deviation test, however, revealed that the trouble was the work of the tubercle bacillus, and its findings were confirmed by inoculation of guinea-pigs. Nothing else in any of the cases gave the clue to the bacillary nature of the acute kidney trouble. A positive response to this test is obtained with the urine only when there is a tuberculous focus somewhere in the urinary apparatus. In the above four cases the reaction became negative as recovery progressed in three cases or the nephritis settled into a chronic stage in the fourth.

Presse Médicale, Paris

May 20, XXIII, No. 22, pp. 169-176

55 Improvised Apparatus for Treating Compound Fractures of the Femur. (Fractures compliquées de cuisse.) J. L. Faure.
56 Gonorrheal Orchitis After Shell Wounds of Testicle; Two Cases, Three and Five Years After Gonorrheal Infection. Gaucher and others.
57 Localization of Foreign Bodies in the Tissues. L. C. Bailleul.
58 Surgical Anatomy of the Leg for Emergency Operations. A. Broca.
59 *Strong Odors Protect Against Lice. (Destruction des poux dans les épidemies de typhus exanthématique.) C. G. Delta.
60 Respirator to Protect Against Inhaling Gases, Dust, etc. (Masque contre les vapeurs asphyxiantes.) Devèze and Orsaud.

59. **Strong Odors Keep Off Lice.**—At least this was Delta's experience during a recent epidemic of typhus at Alexandria. After laboratory research had shown that lice try to escape from strong odors, he had the usual prophylactic measures supplemented by applying to the body from head to feet a strong cologne water. It was made inexpensively for the purpose with a particularly strong and lasting perfume. The odor seemed to repel vermin and the alcohol destroyed the eggs already deposited. In order to give the measure a thorough trial, the preliminary bathing and soaping were omitted. There were two distinct epidemics of typhus at the time, one outside the city limits and one in the heart of town, with ninety-six and fifty-two cases, and at each point the epidemic died out after the preventive use of the perfume.

Revue Médicale de la Suisse Romande, Geneva

May, XXXV, No. 5, pp. 241-296

61 *Purulent Pleurisy Complicating Artificial Pneumothorax. M. Jacot. Commenced in No. 3.
62 *Remote Results of Artificial Pneumothorax. (Résultats éloignés de la méthode de Forlanini.) R. Burnand.
63 *Advantages of Letting the Patients Sit up in Pneumonia. E. Cottin.

61. **Purulent Pleurisy Complicating Artificial Pneumothorax.**—Jacot here concludes his long study of this subject. It is based on five years' experience at Leysin, Hauteville and other Swiss sanatoriums, a total of twenty-five cases; the details of each are given. Eight of the patients are in good condition to date, the others have died from the progress of their pulmonary tuberculosis or from intercurrent disease, and, in a few cases, from the purulent pleurisy itself. The first instalment of the article was reviewed in these columns June 5, p. 1947.

62. **Ultimate Outcome of Artificial Pneumothorax.**—Burnand is the medical director of the public sanatorium at Leysin, and he here analyzes the results of artificial pneumothorax as he has induced it in about a hundred cases of pulmonary tuberculosis. He cites in full three case histories to show that this measure is not only liable to induce temporary improvement, but it may eventuate in a complete clinical cure. One of these patients was a young man with a febrile cheesy tuberculous process in one lung, rapidly progressing in spite of two months of sanatorium treatment. Then artificial pneumothorax was induced and in three weeks the temperature had dropped to normal and in ten months the clinical cure was complete. The pneumothorax was kept up for a total of two years, during which he resumed his office work. Eight months after all treatment had been suspended, he joined his regiment at the call to arms and has served through the campaign with nothing to suggest his former trouble, not even, he writes, after marching 15 kilometers in a pouring rain with his full load of equipment.

Analysis of all his material demonstrates that when artificial pneumothorax fails to induce a clinical cure this is owing to the independent evolution of preexisting lesions in the other lung or elsewhere or to adhesions in the pleura which prevent the compression from being complete. He does not apply the method unless he regards the case as incurable otherwise, comparing it to surgery in malignant disease. Even if there is already metastasis, yet this does not hinder us from giving the patient the benefit of removal of the primary focus. And the benefit is greater the earlier the treatment is applied. In short, he declares, "There is no measure that approaches artificial pneumothorax in the number of cases of clinical cures, half-cures and rescues from impending death."

63. **Letting Patients Sit Up in Pneumonia.**—Cottin has tried in twenty cases of pneumonia getting the patients out of bed for three or four hours in the afternoon, as Widmer advocates. (Mentioned in THE JOURNAL, June 20, 1914, p. 2001.) The youngest was 20, the oldest 80; all had rise of temperature up to 40 C. (104 F.), and they were merely moved to an arm chair beside the bed and well covered up. Each one declared that he felt better, could breathe and expectorate more easily, and they did not perspire so much. The temperature dropped in several, in some by a degree and a half Centigrade. There was less tendency to cyanosis, and the respiration grew slower and deeper. No indications of weakness, not even on the part of the heart, were evident. In pneumonia more than in any other disease, the physician must watch for and be guided by the clinical indications, without any preconceived ideas. In estimating the effect of his measures he should recall Magendie's retort: "And didn't you ever try the effect of doing nothing at all!" At the same time, Cottin is convinced that the modification of the circulation induced by sitting up may have a decidedly favorable influence when there is much congestion or dyspnea and the heart is close to exhaustion. The diaphragm drops lower, which relieves the heart, and the blood accumulates in the legs, affording further relief. In one case the circumference of the thigh increased 0.5 cm. after the change from the recumbent to the seated position; the circumference of the calf increased by 1.5 cm. This is equivalent to withdrawing 200 or 300 c.c. blood from the circulation. The effect of the change of position was always most marked with pneumonia of the lower lobes.

Deutsche medizinische Wochenschrift, Berlin

May 13, XLI, No. 20, pp. 577-604

64 Bread and Its Properties. III. M. Rubner.
65 *Seasonal Occurrence of Cholera, Dysentery, Typhoid and Typhus. (Das jahreszeitliche Auftreten der Kriegsseuchen.) K. Kisskalt.
66 *Abortive Treatment of Tetanus. (Tetanusinfektion und Abortivbehandlung des Wundstarrkrampfs.) O. Teutschlaender.
67 Early Differentiation of Gas Phlegmons with Roentgen Rays. L. Fineke.
68 *Diagnosis of Duodenal Ulcer. A. von Rothe and K. Pollack.
69 Treatment of Fractured Femur. (Oberschenkelfrakturen.) O. Witzenhausen.
70 Fenestrated Celluloid Dressings. (Zelluloidfensterverbände.) H. L. Heusner.
71 *Direct Inhalation of Mercury. (Neue Methode der Quecksilber-Inkorporation zur Behandlung der Syphilis.) J. Frankenstein (Berlin-Schoneberg).
72 Ecthyma. (Eine Kriegsdermatose.) E. Kromayer.

65. **Seasonal Occurrence of Epidemics.**—Kisskalt refers merely to cholera, dysentery and typhus. The mild catarrhal affections of the bowels which are so common in summer and fall afford a predisposition to cholera and dysentery, and rouse latent carriers to active distribution of their germs —all factors tending to explain the seasonal occurrence of these diseases in the summer and fall. Typhus, on the other hand, is a late fall and winter disease, and in wars it prevails most in settled camps and occupied towns. In the Crimean war it appeared first among the English, but the second year the English escaped, while the French had it both years. The cavalry seemed to escape. These facts all harmonize with the louse theory, as also the further fact that after the Crimean war typhus developed in a number of the larger cities. In the cities it showed no seasonal variation. Kisskalt explains this by the fact that the lower classes are so accustomed to vermin that they make no

effort to get rid of them even in the summer, while soldiers take advantage of the warmer weather to rid themselves of lice, and the epidemic then dies out. As a contribution to the question of vermin in the different seasons, he gives the statistics for 1914 from the municipal lodging house at Berlin in which there were 176,574 admissions nearly evenly distributed throughout the year. The applicants for a night's shelter here voluntarily give up their clothes to be disinfected when they feel vermin on them, and the number who did this was about the same for each month, the range being from 5.1 per cent. of 14,933 admissions to 8 per cent. of 14,459 per month. The highest percentage was in January and August.

66. **Abortive Treatment of Tetanus.**—In three wounded soldiers tetanus bacilli were cultivated from the wound, but there were no symptoms or signs of tetanus at any time except that one man had slight and transient painless contracture of the sole of the wounded foot. Each of the men had been given a small preventive injection of antitetanus serum and, on the warning of the spasm in the sole, another dose was given and there were then no further symptoms. In the three cases the wounds were shallow and, although extensive, were secreting freely, and the air was not shut out. Notwithstanding vigorous local disinfection, tetanus germs cultivated from the wound several weeks later were still virulent enough to kill a mouse. Teutschlaender recalls that even a small scratch that gets hermetically sealed by the blood clotting on it favors the proliferation of tetanus germs. He had a case of this kind in a man of 63 who succumbed in three days to tetanus developing three days after he had got scratched behind his ear with a straw in unloading hay. The linear scratch was scarcely 3 cm. long and not inflamed, but covered air tight with dried secretions.

68. **Diagnosis of Duodenal Ulcer.**—Rothe and Pollack report a case of disturbances in a woman of 25 which suggested a neurosis, ptosis or ulcer or combination of all three. The aggravation of the disturbances under emotional stress, and under cold applications, signs of vagotony and the variability in the times when the disturbances recurred, testified in favor of a purely nervous trouble, but the occasional subsidence of the pain on reclining, the aggravation after drinking considerable fluid, and the slight downward displacement of the stomach as shown in the roentgenogram spoke for ptosis. All the other symptoms pointed to an ulcer although there was no occult blood in the stool. The special symptoms were the tenacity of the disturbances and their localization in the upper part of the digestive tract, the regular appearance of the pain after heavy eating, a deep (direct) painful point in front and a shallow (projected) tender point at the rear, and the tendency to "hunger pain." Other features were the improvement in summer, the slight disturbances at night, the continuous loss of flesh during the year, and, finally, the long history of abdominal disturbances which had continued after removal of one ovary and the appendix to which the trouble had been imputed at the time. The "nervousness" had commenced three years before the stomach disturbances and these had been growing worse for three years. The operation revealed two duodenal ulcers with functional stenosis and enormous dilatation above. All the symptoms disappeared after the operation.

71. **Inhalation of Mercury.**—Frankenstein has devised a little inhalation apparatus for the administration of mercury vaporized by electric heat. The effect of the treatment and the proportion of the mercury recovered from the urine demonstrate that as much of the drug is utilized in this way as by injection and inunction. The method is so simple, safe and convenient that his patients much prefer it to other technics.

Medizinische Klinik, Berlin

May 23, XI, No. 21, pp. 581-606

73 *Charcoal and Iodin Curés Typhoid Carriers. (Behandlung der Typhusbacillenträger.) F. Kalberlah.
74 Clinical and Serologic Study of Vaccination Against Typhoid. (Typhusschutzimpfung.) J. Basten.
75 *Typhus. (Umfrage über Uebertragung und Verhütung des Fleckfiebers.) F. Stoklosinski.
76 Trauma and Acute and Chronic Disease of Bones and Joints. (Knochen- und Gelenkentzündungen.) E. Schepelmann.
77 Case of Still's or Mikulicz' Disease or Both. H. Strauss.
78 *Acute Yellow Atrophy of the Liver Following Treatment for Primary Syphilis. Halbey.
79 Hydrogen Dioxid in Treatment of Gonorrhea. H. L. Heusner.
80 Meningitis Simulating Typhus. F. F. Reich.
81 *Arsenic and Potassium Iodid in Chronic Bronchitis. Wilcke.

73. **Charcoal-Iodin for Typhoid Carriers.**—Kalberlah remarks that it is comparatively easy to banish typhoid bacilli from the urine and consequently it is no drawback to the method he proposes that it frees the stools alone from typhoid bacilli. This it accomplished fully in the five cases in which it had been applied at date of writing. Charcoal alone proved inefficient, but when its action was supplemented by that of tincture of iodin, success was constant. The bacilli promptly disappeared from the stools and none have been found during the four months since with examinations at about five-day intervals. He gave from 7 to 15 drops tincture of iodin in a glass of water, half an hour after eating, three or five times a day. The blood charcoal was taken three or five times a day, dose one teaspoonful.

75. **Typhus.**—Stoklosinski states that during his twenty-one years of practice in Galicia he has encountered typhus constantly, averaging fully a hundred cases a year. Fifteen years ago he contracted it himself. There are certain places in Galicia, he says, where typhus seems to be endemic; all were marshy and there were no provisions for sanitation. It is his impression that during the summer flies and mosquitoes contribute in the spread of typhus, but he thinks that fleas have a share. This impression is based on the cases occurring in official inspectors and others merely glancing into a room where there were typhus patients.

78. **Acute Yellow Atrophy of the Liver in a Syphilitic.**—Halbey's patient was a robust young man who died soon after entering the hospital, and the necropsy confirmed the presumptive diagnosis of subacute yellow atrophy of the liver. It was learned later that three weeks previously he had finished a course of salvarsan and calomel for primary syphilis. The total of salvarsan incorporated during the three or four weeks was 2.33 gm. Halbey cites evidence from the literature which proves beyond question of doubt, he declares, that the liver is the chief storage organ for salvarsan. The symptoms presented by his patient indicated a severe toxic action. The primary syphilis had apparently completely subsided under the vigorous antisyphilis measures three weeks before the liver trouble became evident. Halbey refers to two or three similar cases in the literature, and warns that salvarsan should be given very cautiously if there is any evidence that the liver is already impaired or the heart functioning is not quite normal, thus throwing extra work on the liver.

81. **Arsenic and Potassium Iodid in Chronic Bronchitis.**—Wilcke has found this combination extremely effectual and thinks that improper dosage explains the lack of success reported by certain writers. His method is to give 2 drops of Fowler's solution three times a day on the first, third and fifth days, alternating it with a 5 per cent. solution of potassium iodid, of which a quarter of a teasponful is taken three times a day on the second, fourth and sixth days, and so on. Each of the drugs is taken in milk after meals. Larger doses are liable to derange the stomach.

Zentralblatt für Chirurgie, Leipzig

May 22, XLII, No. 21, pp. 569-584

82 Splints for Wounded Knee or Fracture Nearby. (Schiene für Schussverletzungen und Empyem des Kniegelenkes.) M. Grundler. (Schiene für Schussfrakturen in der Umgebung des Kniegelenkes.) Neuffer.

Zentralblatt für Gynäkologie, Leipzig

May 22, XXXIX, No. 21, pp. 553-568

83 Suture of Perineum. (Zur Dammnaht.) P. Strassmann.
84 *Prevention of Mastitis. (Zur Verhütung der Brustentzündung.) P. Strassmann.

84. **Prevention of Mastitis.**—Strassmann has found that women in trying to prepare the breasts for lactation are often advised to rub them with alcohol, "to toughen them," and that

this practice directly breeds mastitis later. The alcohol—often used in large amounts and repeatedly applied—makes the tissues hard and friable, so that the breast cracks readily. Another prevalent bad habit is that the breast is washed off frequently. If this is done before and after each nursing, this amounts to ten or fourteen times a day, and the skin becomes macerated and the epithelium peels off. A cloth smeared with salve should be applied after the child has nursed, until the nipple and breast have adapted themselves to the nursing process, striving thus to keep the tissues soft and pliable. A Peruvian balsam salve is good. It can be wiped off with cotton and a little boiled water just before the child is placed at the breast again. A third important measure is never to let any one but the infant touch the nipple. When it is offered to the child, the hand should grasp the breast around the nipple and thus force it up, never taking hold of the nipple itself.

Zentralblatt für innere Medizin, Leipzig

May 22, XXXVI, No. 21, pp. 325-340

85 Cholesterin Content of Human Blood Serum. H. Pribram.
86 *Heredity of Tendency to Diabetes. (Vererbung der diabetischen Konstitution.) H. Pribram.

86. **Heredity of Tendency to Diabetes.**—Pribram gives the family tree of a couple with gout in the husband and diabetes in the wife, each with one parent with the same disease. Of their nine children, the fate of three is unknown, but the oldest three of the other six have pronounced diabetes: one of the others has died of a heart defect. There are ten children in the third generation and none has shown any tendency as yet to diabetes or gout. Pribram is watching their development with interest.

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

May 8, I, No. 19, pp. 1587-1662

87 *Premature Senile Dementia. (Praesenium en psychose.) A. M. Benders.
88 Research on Activation of Pancreas Lipase by Cholic Acid Salts. (Aktiveering van pancreaslipase door cholzure zouten.) J. A. De Jonge.
89 Importance of Combating Tuberculosis by Prophylaxis in Childhood. G. Scheltema and J. J. Pigeaud.

May 15, No. 20, pp. 1663-1746

90 *Loss of Memory. (Bijdrage tot de kennis der amnesie.) P. H. M. Travaglino.
91 Roentgenology of Chronic Appendicitis. C. Bles.
92 *General Iodin Treatment of Surgical Tuberculosis. E. H. B. Van Lier.

87. **Presenile Dementia.**—Benders has been able to find only two cases in the literature similar to four he has encountered in the course of a few years. Another case from the records of the Meerenberg asylum in his charge might be included in the group. This case was in a man, but his own four patients were women in the fifties. In all there was a rapidly progressive loss of memory and loss of the faculty of perception. The brain seemed to have lost the faculty of responding to impressions, especially optic impressions. They paid no attention to anybody or anything and stayed indefinitely wherever they were placed, never speaking, not even to themselves, when constrained to speak, merely repeating some single word or their own name. There never was anything to suggest the Korsakoff or analogous syndromes; the symptoms were only those of the dropping out of certain mental faculties, deficit phenomena. Necropsy in one case and in the two on record showed pronounced atrophy of the frontal convolutions. The remainder of the brain was macroscopically normal but the microscope showed in parts of the cortex that the cells had evidently suffered much. A significant feature of all the cases was that the mother in two cases and the father or a brother in the others had had apparently the same trouble in their day. Heredity as a factor in senile dementia has not been sufficiently emphasized hitherto, he remarks, citing Tay-Sachs' findings in amaurotic idiocy in analogy.

90. **Loss of Memory.**—Travaglino gives a survey of much literature on amnesia, including some articles published in THE JOURNAL, and then gives a detailed report of total loss of memory in a man of 46 whose mind otherwise seems absolutely unimpaired.

92. **General Treatment with Iodin in Surgical Tuberculosis.**—Van Lier reports the application, in twelve cases, of Hotz' iodin method for general, instead of local, treatment of tuberculous lesions in the bones, peritoneum or lymph glands. His impressions are most decidedly favorable. No signs of toxic action were apparent. Particularly striking benefit was realized in the case of a boy of 4, whose mother had died of tuberculosis. He had thirty-four open fistulas, rebellious to all measures. Two years after the first signs of trouble, Van Lier started the intramuscular injections of iodin, and in one year and eleven days from that date the last one of the fistulas had healed. The child is in good health at present, over two years later. Van Lier gives the details further of four cases in which the general iodin treatment was given to outpatients, who continued otherwise their ordinary life. The benefit realized by ambulant treatment in this way he regards as the strongest testimony to the beneficial general effect of the intramuscular injections of iodin. The solution used was a mixture of 9 parts iodoform, 10 parts of a 10 per cent. tincture of iodin, and 90 parts glycerin. The first intramuscular dose was 3 c.c. and the following 2 c.c. every two weeks to a total of 22 c.c. of the mixture. Hotz' announcement in regard to this general treatment with iodin was summarized in THE JOURNAL, Oct. 12, 1912, p. 1414. He explained the benefit from the iodin as a vital reaction; the first manifest sign of it is lymphocytosis. The ferment of the lymphocytes acts on fat, including the fat of bacteria. All of Van Lier's twelve patients were bedridden from their tuberculous affection and eleven left the hospital with their fistulas healed and all but two were in good condition. These two had concomitant severe pulmonary lesions and one has since died from these. The general iodin treatment therefore is not promising when the lungs are already involved, but for tuberculous bone and joint processes its favorable action is unmistakable, he reiterates in conclusion.

Hospitalstidende, Copenhagen

May 15, LVIII, No. 20, pp. 477-508

93 *Köhler's Disease of the Foot in Children. (Den Køhlerske Sygdom i os naviculare pedis hos Børn.) E. Meulengracht.
94 General and Comparative Pathology. C. J. Salomonsen.

93. **Köhler's Bone Disease of the Foot in Children.**—Meulengracht has five cases to add to the thirty he has found on record. Swelling, tenderness and pain are the symptoms of this affection which is known only in children, usually 5 or 6 years old. With or without treatment it completely subsides in from one and a half to two and a half years. Roentgenoscopy shows invariably an abnormally black shadow cast by the scaphoid bone. It seems to contain four times as much lime as its sound mate, and to have shrunken a little. The periosteum seems normal. It is still a problem whether trauma or some defect in ossification or both is the cause of the trouble. There was a history of slight trauma in two of his own five cases.

Ugeskrift for Læger, Copenhagen

May 13, LXXVII, No. 19, pp. 731-780

95 *Experiences with Congenital Dislocation of the Hip Joint. (Luxatio coxae congenita.) H. Scheuermann.

95. **Congenital Dislocation of the Hip Joint.**—Scheuermann reports 75 per cent. of anatomic cures in the fifty-five children with unilateral dislocation, and 57 per cent. in the forty-six bilateral cases. In three of the above cured patients the head of the femur is not exactly in the actual center of the acetabulum but the gait is quite normal. Lorenz' method was applied in nearly every case. After the dislocation has been reduced under general anesthesia and the cast applied, the child has to be brought back for Roentgen control one, four and eight months later, if all goes well. In this article a number of useful points are discussed which are not found in the textbooks, such as management of the case when the neck of the femur is fractured during the efforts at reduction. This occurred in two of the cases and in one operative measures became necessary. This was the only operative case.

PROCEEDINGS OF THE SAN FRANCISCO SESSION

MINUTES OF THE SIXTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT SAN FRANCISCO, JUNE 21-24, 1915

HOUSE OF DELEGATES

First Meeting—Monday Morning, June 21

The House of Delegates met in the Exposition Memorial Auditorium, and was called to order at 10:30 a. m. by the President, Dr. Victor C. Vaughan, Ann Arbor, Mich.

The preliminary report of the Committee on Credentials was called.

Dr. E. J. McKnight, Connecticut, Chairman, reported that the Committee on Credentials had examined and approved the credentials of thirty-six delegates which conformed to the rules of the House.

It was moved that the report be received, and the accredited delegates be seated as members of the House of Delegates.

Seconded and carried.

The Secretary called the roll and announced a quorum present.

The next in order was the presentation, correction and adoption of minutes of the sixty-fifth annual session.

The Secretary stated that these minutes had been published and a copy of the same sent to each member of the House of Delegates, with a request that attention be called to any inaccuracies that may have appeared. No replies had been received.

Dr. Floyd M. Crandall, New York, moved that the minutes be accepted and approved as published.

Seconded and carried.

Remarks by the President, Dr. Victor C. Vaughan

I have no formal address to deliver to the House of Delegates. I have enjoyed my year as President, and if there be any politics in the American Medical Association, I, as President, have not discovered it.

There are two or three things to which I desire to call the attention of the House of Delegates in an informal way. In the first place, going up and down the country, visiting state and local societies, it has seemed to me that there are certain pressing needs of the American medical profession. Medicine is advancing so rapidly that men, even among the recent graduates of our best schools, are failing to keep up with the times. There are several excellent postgraduate schools which are doing good work, but the young doctor often feels he cannot be away from home, and I wish simply to offer this as a suggestion which, I suppose, will go to the Board of Trustees. It occurs to me that it would be possible for the American Medical Association to send to different states clinical teachers versed in the latest and best methods of diagnosis. We have been educating the public in preventable diseases, and we have accomplished a great work. It is getting to be true now that many of the more intelligent of the laity know much more about these preventable diseases than some of our doctors, and I wonder whether it would be possible to reach the doctors and give them the latest and best methods of clinical diagnosis.

Another thing I wish to mention is that I am afraid the profession at large is in danger of losing its prestige in the great advance that is being made in preventive medicine. I think that we are at a critical point. For instance, the legislature of Michigan recently made an appropriation of $100,000 for the study of tuberculosis in the state. This money is placed at the disposal of the Michigan State Board of Health. A member of the board wrote to the executive officer of the National Anti-Tuberculosis Association for a man to take charge of this work. Of the four recommended by the National Anti-Tuberculosis Association to take charge of this work, three are non-medical men. Has it come to pass that work of this kind must be undertaken by men who are not educated physicians? It seems to me that this is all wrong. I am aware of the fact that several schools are now offering courses in preventive medicine, but they are not furnishing enough men, and the sanitary engineer and the social worker are supplanting the doctor in this great work.

Reference Committees

The President then announced the following reference committees:

SECTIONS AND SECTION WORK

E. E. Montgomery, Chairman.....Philadelphia
J. Rilus Eastman.....Indianapolis
George Hare.....Fresno, Calif.
Leroy Southmayd.....Great Falls, Mont.
A. W. McAlester.....Kansas City, Mo.

RULES AND ORDER OF BUSINESS

G. W. Cook, Chairman.....Washington, D. C.
John O. Polak.....Brooklyn
J. H. J. Upham.....Columbus, Ohio
G. V. I. Brown.....Milwaukee, Wis.
W. L. Noble.....Chicago

MEDICAL EDUCATION

H. B. Ellis, Chairman.....Los Angeles
Miles F. Porter.....Fort Wayne, Ind.
Richard C. Cabot.....Boston
Perry Bromberg.....Nashville, Tenn.
A. H. Levings.....Milwaukee, Wis.

LEGISLATION AND POLITICAL ACTION

E. J. Goodwin, Chairman.....St. Louis
Wm. H. Seeman.....New Orleans
W. E. Anderson.....Farmville, Va.
M. R. Walker.....Reno, Nev.

HYGIENE AND PUBLIC HEALTH

J. W. Kerr, Chairman.....Washington, D. C.
L. W. Littig.....Davenport, Ia.
Wm. J. Laler.....Trenton, N. J.
C. B. Cooper.....Honolulu, H. I.
C. S. Crane.....Grand Forks, N. D.

AMENDMENTS TO CONSTITUTION AND BY-LAWS

Floyd M. Crandall, Chairman.....New York
C. E. Cantrell.....Greenville, Tex.
Sol. G. Kahn.....Salt Lake City
Dean Lewis.....Chicago
John H. Anderson.....Washington, D. C.

REPORTS OF OFFICERS

William H. Arthur, Chairman.....U. S. Army
A. R. Mitchell.....Nebraska
Walter T. Williamson.....Portland, Ore.
Frank E. McCullough.....U. S. Navy
R. W. Runyon.....Ancon, C. Z.

CREDENTIALS

E. J. McKnight, Chairman.....Hartford, Conn.
E. C. Davis.....Atlanta, Ga.
M. F. Jarrett.....Fort Scott, Kan.
H. E. Randall.....Flint, Mich.
E. A. Hines.....Seneca, S. C.

MISCELLANEOUS BUSINESS

L. J. Hirschman, Chairman.....Detroit
G. S. Peterkin.....Seattle
J. C. MacEvitt.....Brooklyn
T. C. McCleave.....Berkeley, Calif.
Martin L. Graves.....Galveston, Tex.

Report of the Secretary

The Secretary presented his report as follows:

To the Members of the House of Delegates of the American Medical Association:

For the year 1914-15, I submit the following report:

MEMBERSHIP

The membership of the various constituent state associations, which constitutes the membership of the Association, according to the records in the Secretary's office, May 1, 1915, is shown in the table on page 64.

FELLOWSHIP

The Fellowship of the American Medical Association on May 1, 1914, was 41,029. During the past year, 343 Fellows have died, 2,204 have resigned, 390 have been dropped as not eligible, 577 have been dropped for nonpayment of dues and 6 have been removed from the rolls on account of being reported "not found," making a total of 3,520 names to be deducted from the Fellowship roll. There have been added 4,857 names to the Fellowship roll, of which 3,713 were transferred from the subscription list. The Fellowship of the American Medical Association on May 1, 1915, was 42,366, a net increase for the year of 1,337.

This gain in the number of Fellows is due largely, as in previous years, to circularizing subscribers to THE JOURNAL who were eligible, urging them to become Fellows.

TABLE—ORGANIZATION OF CONSTITUENT ASSOCIATIONS

Constituent Association of	No. Counties in State	No. Component Societies in State	Number Counties in State Not Organized		No. Physicians (from Reg. or Ed. Directory)	Number Members of State Association		No. A. M. A. Fellows in State	No. Subscribers to JOURNAL in State*
			1914	1915		1914	1915		
Alabama	67	67	.....	.....	2,518	1,760	1,744	309	172
Arizona	14	11	3	3	291	169	165	117	64
Arkansas	75	67	5	7	2,652	1,255	1,169	393	178
California	59	37	22	20	5,353	2,463	2,323	1,883	798
Colorado	63	57	26	27	1,782	791	708	520	220
Connecticut	8	8	.....	.....	1,630	914	922	524	203
Delaware	3	3	.....	.....	263	99	107	72	40
Dist. Columbia			.....	.....	1,421	537	559	300	219
Florida	50	30	25	19	1,177	412	523	228	197
Georgia	152	84	62	56	3,255	1,314	1,757	633	553
Idaho	33	3	20	20	446	116	128	92	112
Illinois	102	99	1	.....	10,286	6,055	6,501	3,867	1,567
Indiana	92	87	3	3	5,001	2,420	2,441	1,154	443
Iowa	99	96	3	2	3,733	2,019	2,061	1,229	467
Kansas	105	59	24	39	2,840	1,240	1,323	669	318
Kentucky	120	115	4	4	3,621	2,132	1,813	634	262
Louisiana	64	41	25	22	2,030	967	963	401	253
Maine	16	14	1	.....	1,200	625	625	314	116
Maryland[1]	23	22	2	2	2,222	1,080	1,166	754	638
Massachusetts[2]	14	18	.....	.....	5,708	3,440	3,505	2,024	940
Michigan	83	59	2	2	4,180	2,230	2,506	1,546	491
Minnesota	86	38	3	3	2,581	1,980	1,969	1,153	557
Mississippi	79	48	3	1	2,047	1,000	979	253	138
Missouri[3]	114	96	14	13	6,224	3,160	3,053	1,550	577
Montana	42	14	20	23	578	260	275	190	110
Nebraska	93	61	23	23	1,867	996	1,047	536	264
Nevada	16	4	13	12	155	74	49	57	24
New Hampshire	10	10	.....	.....	705	503	495	231	44
New Jersey	21	21	.....	.....	3,012	1,575	1,607	956	369
New Mexico	20	9	17	13	447	230	154	112	91
New York	62	59	4	2	15,301	7,410	7,904	4,706	1,858
North Carolina	100	79	7	12	1,987	1,130	1,216	411	240
North Dakota	52	14	3	3	577	345	312	262	99
Ohio	88	86	2	2	7,912	3,650	3,987	2,050	936
Oklahoma	77	74	0	3	2,612	1,131	1,276	656	495
Oregon	35	10	4	1	1,150	442	520	260	238
Pennsylvania[2]	67	63	4	4	11,611	6,528	6,157	4,004	1,425
Rhode Island[2]	5	6	.....	.....	761	377	412	268	130
South Carolina	44	38	7	6	1,262	728	755	253	183
South Dakota	67	14	7	7	674	304	317	230	133
Tennessee	96	63	55	33	3,380	1,453	1,150	578	290
Texas	250	146	75	73	6,024	3,005	3,362	1,300	680
Utah	29	4	18	24	446	216	216	136	89
Vermont	14	11	.....	.....	685	353	391	174	77
Virginia[4]	100	46	.....	54	2,420	1,593	1,694	634	449
Washington	39	20	18	18	1,644	840	896	556	245
West Virginia	55	33	12	10	1,678	915	847	536	367
Wisconsin	71	55	1	1	3,737	1,760	1,871	1,088	473
Wyoming	22	5	17	17	237	120	119	64	47
Canal Zone			.....	.....	80	75	48	38	11
Hawaii	5		.....	.....	146	73	109	28	27
Porto Rico	7	2	.....	.....	274	151	178	48	27
Philippine Is.			.....	.....	745	116	98	28	62
Totals	3,013	2,074	547	584	142,586	74,235	76,020	41,181	18,846
Honorary Fellows and Fellows listed at foreign addresses								53	.....
Fellows in government services								1,132	.....
Number on Fellowship roll, May 1, 1915								42,366	.....
Number on mailing list of THE JOURNAL May 1, 1915								.....	62,250

* Not including Fellows of American Medical Association.

Note.—The number of members of the different associations stated in this table is in accord with the membership of the several associations as they were reported to the Secretary on May 1, 1915.

The lack of an effective uniform system for reporting the membership of the state associations accounts for whatever discrepancies this table shows and detracts from the value of the statement.

Component societies are those societies which compose the state association. A component society may include one county or more.

1. The state of Maryland has 23 counties and the city of Baltimore; Missouri has 114 counties and the city of St. Louis.

2. These state associations are divided into district societies, and these are listed in the table as component societies. Some of these districts are smaller and some larger than the county, the county lines being ignored.

3. Provision is made for the physicians in each of these counties to join the component society in an adjoining county.

4. Virginia has recently adopted the plan of organization and is now establishing component county medical societies.

RESOLUTIONS FROM THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

The corresponding secretary of the Medical Society of the District of Columbia writes that the following recommendation of its Executive Committee was concurred in by formal action of that constituent association.

Moved, That the Executive Committee recommends to the Medical Society of the District of Columbia the adoption of the following resolutions, with instructions and copies thereof be sent to the Delegates, Presidents and Secretaries of the various State Medical Associations; that it be printed in the Washington Medical Annals; and that a copy be sent to the Journal of the American Medical Association with request for its publication therein.

Whereas, Section 3, Chapter 8 of the By-laws of the American Medical Association provides as follows:

Effect on Membership of Removal to Another State.—A member who changes the location at which he practices medicine from the state through whose constituent association he holds membership in the American Medical Association to another state in which there is a constituent association, is eligible to membership in the component society of his new location upon the presentation of a transfer card and an official statement that his dues have been paid in full in the society in which he holds membership. He shall forfeit his membership in the American Medical Association one year after such change of location unless he becomes a member of the constituent association of the state to which he has moved. Provided, however, that if the component society into whose territory such member has moved shall refuse him membership, the member shall be privileged to appeal to the Judicial Council of the Association to determine whether or not he be guilty of any act that warrants the enforcement of the provisions of this section. Pending the decision of such appeal, he shall retain his membership in the American Medical Association through his original state association; and provided, further, that the term "practice of medicine" throughout these by-laws shall be held to mean the offering of service or counsel for the relief of those suffering from abnormal physical or mental conditions: Provided, that nothing in this section shall be construed as exempting any member of the American Medical Association from compliance with the requirements of the civil laws of the state or district into which he may have been removed.

[See By-Laws, Section 3, Chapter VIII, and the standing rule adopted June 18, 1913.]

Be it *Resolved*, That the Medical Society of the District of Columbia is opposed to the foregoing section for the following reasons:

The section is loosely and clumsily worded, and contains provisions of questionable relevancy or practicability. The proviso relating to appeal to the Judicial Council seems meaningless, as it does not appear what "the provisions of this section" are that are to be enforced, or how they are to be enforced. According to the apparent intent, the operation of the section, if enforceable, could have the effect of compelling local and constituent associations against their will to admit members by transfer from other jurisdictions. This method of admitting members by transfer is not contemplated by the procedure prescribed in the constitution of this Society, or doubtless in the constitutions of many other state associations; hence, the virtual effect of this section is autocratically to override and nullify in this respect these constitutions without the consent of the local associations, and even without consulting them. The adherence to the general plan of organization of the American Medical Association required of the constituent associations cannot be construed as granting unlimited control over local affairs. Absolutely complete and unrestricted control over admission to its own membership is a fundamental right vital to the autonomy of any organization. That three outsiders, however excellent, members of the Judicial Council, should have the appellate power to dictate to the hundreds of members of a constituent association as to the admission of new members is totally repugnant to the approved American principle of local self government. Their familiarity with local conditions and local spirit makes the members of a local association far better qualified to act in their own way on applicants for membership than any outside tribunal; their decision should be final, and it is not likely that material injustice will be done. Furthermore, if the right of the American Medical Association to encroach on local prerogatives and override local constitutions in one matter is conceded, there is not a limit to the autocratic interference with personal and local independence and privileges to which it or its managers might not attempt to lay claim.

For the foregoing reasons, the Medical Society of the District of Columbia is not disposed to recognize any authority, jurisdiction or power of interference whatever on the part of the American Medical Association or its Judicial Council with respect to the admission of members or any other purely local matter. Therefore, be it

***Resolved*, That the delegate of this Society to the American Medical Association is instructed to offer and promote the adoption of some such substitute as the following for the foregoing Section 3, Chapter 8 of the By-laws, which should amply meet the requirements of the case.**

Removal of Members.—A member of a constituent association removing from the jurisdiction thereof, may remain eligible for membership in the American Medical Association for a period of eighteen months

following such removal, after which such eligibility shall cease, unless or until it is re-established by his becoming a member of the constituent association of the jurisdiction in which he is located.

NOMINATIONS FOR HONORARY FELLOWSHIP

In addition to the amendment to the By-Laws concerning the appellate jurisdiction of the Judicial Council, the following nominations for honorary Fellowship were laid on the table at the meeting of the House of Delegates held in Atlantic City, June 25, 1914, for the consideration of the House at its annual session in 1915. The Section on Dermatology recommended for honorary Fellowship in the American Medical Association Prof. G. Arndt of Berlin, Germany. The Section on Nervous and Mental Diseases nominated Prof. Otfrid Foerster, Breslau, Germany, and Dr. Wilfrid Harris, London, England.

REAPPORTIONMENT

The attention of the House is called to By-Laws, Section 3, Chapter I, page 6. This is the year for reapportioning the delegates of the various state associations; the by-law requires that the House of Delegates shall appoint a committee of five on reapportionment of which the President and Secretary shall be members. I suggest that this appointment be made early in the session so that the Committee may report to the House as promptly as possible.

Respectfully submitted,

ALEXANDER R. CRAIG, Secretary.

It was moved that the report be referred to the Reference Committee on Reports of Officers.

Seconded and carried.

Report of the Board of Trustees

Dr. William T. Councilman, Massachusetts, Chairman, read the Report of the Board of Trustees, which was referred to the Reference Committee on Reports of Officers.

The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

The activities of the Association in the interests of the medical profession and the public have been satisfactorily successful during the past fiscal year. The Judicial Council, the Council on Medical Education, and the Council on Health and Public Instruction each will present directly to you detailed reports of their activities. A report concerning the Council on Pharmacy and Chemistry will be presented for your consideration by a committee appointed by the board at its meeting in February last.

PUBLICATIONS

THE JOURNAL

The addenda to this report give details concerning the circulation of THE JOURNAL. It will be noted that the average weekly circulation for 1914 was over 63,000 copies. This is an actual increase in the regular mailing list of 3,177 over the year preceding. During the last fiscal year, 14,655 names were placed on the mailing list and 12,319 taken off. This latter figure includes physicians who have died, certain of those who were ineligible to continued Fellowship, those who voluntarily discontinued, and those who were dropped for nonpayment. The increase was due to continued effort made during the year to increase circulation. During 1914 there were transferred from the subscription list to the Fellowship roll 3,546 names. These transfers resulted from invitations issued to those subscribers who were eligible to become Fellows. It is merely repeating what we have said before to say that many of the Fellows originally took THE JOURNAL as subscribers and that these transfers are constantly being made. In the United States there are approximately 144,000 physicians. The average weekly issue of THE JOURNAL for 1914 was 63,887 copies, so that over 45 per cent. of the physicians in the United States receive THE JOURNAL directly. In addition to this number, those who read THE JOURNAL in the libraries and consult the files of their fellow practitioners increase the percentage of the physicians who avail themselves of THE JOURNAL to a much higher proportion. While a gratifying number of new subscriptions come without solicitation, the largest increase is the result of three methods employed to this end: (1) through circular letters and sample copies of THE JOURNAL; (2) through agents working on commission, and (3) through agents acting as organizers and working on a basis of salary, expenses and commission.

ARCHIVES OF INTERNAL MEDICINE

This journal may be regarded as a success, notwithstanding the fact that last year there was a financial loss amounting to $958.02. It must be noted, however, that the number of pages in each issue of THE ARCHIVES has been constantly increasing. In the two volumes for 1914 there were 1,926 pages, whereas in the two for the first year—1908—there were but 1,280—an increase of one-third. THE ARCHIVES has a secure place in the scientific medical literature of the world. During the past year, its circulation shows a gain of 102. The circulation at the close of the fiscal year was 2,077. The total number of copies printed during the year being 29,832.

AMERICAN JOURNAL OF DISEASES OF CHILDREN

This publication, too, has met with complete success. The last year showed a slight profit—$44.66. The circulation is slowly but steadily increasing; in 1914 it was 2,252—a gain of 186 over the year 1913. The total number of copies printed in 1914 was 27,846.

COOPERATIVE MEDICAL ADVERTISING BUREAU

The Bureau is proving to be a help and a stimulus to the State Journals in many ways. Twenty-four State Journals, the official publications of twenty-eight state associations, now cooperate in this organization. The Bureau was established Dec. 1, 1913, at which time twenty-two journals joined in this movement. Since that time, two of the remaining six State Journals have joined the Bureau. The original twenty-two journals were published in thirteen different sizes. They have now been standardized in the two generally accepted sizes for medical papers, and the quality of the printed paper has been very greatly improved. These mechanical improvements are marked; they have been commended by the readers as well as by the advertising patrons. In addition to these physical improvements, there has been a notable advance in the scientific character of the articles published in these journals. Advertising to the amount of $10,000 has been secured through the efforts of the Bureau, and it is a conservative estimate to state that at least 50 per cent. of this business would never have been directly obtained by these publications acting independently. It is quite evident that these journals are using their increased revenue for the betterment of their publications and that they are serving the state organizations more effectively than it was possible for them to do when they were conducted entirely independently one of the other.

FINANCIAL

Appended to this report will be found the Treasurer's report, as well as that of the Auditors. It is unnecessary to make more than a brief comment in regard to the finances, as the Auditors have given a rather full detailed statement concerning the various sources of income and expenditures.

As will be remembered, last year we called attention to the fact that on account of the extension of the various activities of the Association the profits had practically reached the vanishing point. This year it will be noticed that the profits are slightly better, but only $3,984.59. A reference to the Association Expenses, under Exhibit B, will show that these expenses—that is, such expenses as those of the propaganda work, the chemical laboratory, medical education, therapeutic research, organization, health and public instruction, distinguished from those connected with the publication of THE JOURNAL—amount to $82,286.15, the major portion of which must be regarded as being expended for purely altruistic work.

As will be noticed under Exhibit A, a reserve fund has been created, which now amounts to $118,832.50. The Board has adopted a resolution to the effect that this Reserve Fund is not to be drawn on except by an affirmative vote of seven members of the Board of Trustees, and that the fund shall be added to yearly.

It must be very evident to you that the expenses of the Association must not increase but should decrease.

Health Conservation Day

In line with the suggestion contained in the report of the Committee to Consider the Mode of Commemorating the Completion of the Panama Canal, presented to the House of Delegates at its meeting in Atlantic City, and referred to the Board of Trustees, the board has set aside Wednesday, June 23, as Health Conservation Day, in recognition of the services of the men whose contributions to sanitary science and preventive medicine have made possible the construction of the Panama Canal, and in commemoration of the progress of medicine which has resulted in the betterment of conditions of human life. All the sections of the Scientific Assembly are cooperating in the observation of Health Conservation Day, and have arranged to hold no section meetings. The program for the day consists of a general meeting in the morning, held in the Exposition Memorial Auditorium, at which will be given formal addresses reviewing the work of the medical profession which has resulted in human betterment. In the afternoon there will be short talks by well-known experts, illustrated by lantern slides and motion pictures on malaria, dysentery, yellow fever, typhoid fever, plague, hookworm, leprosy, tuberculosis, syphilis, gonorrhea, pellagra, rabies, epidemic cerebrospinal meningitis, poliomyelitis, pyorrhea alveolaris and trypanosomiasis.

Health Conservation Day and the Scientific Exhibit

At the same time that these lectures are given in the convention halls, demonstrators will present exhibits in the corridors on the ground floor of the Auditorium, illustrating the subjects above enumerated. It is not expected that either of these programs will be exhaustive, but there will be shown enough of the historical and scientific, by means of lantern slides, charts, pictures and specimens, to prove to both physicians and the laity the achievement of medicine in the application of scientific knowledge for the prevention of disease.

In addition, the Board of Trustees has placed an exhibit in the Palace of Education of the Panama-Pacific International Exposition as an evidence of the activities of the Association. The exhibit displays placards showing the educational activities of the Propaganda for Reform Department of THE JOURNAL, the work of the Council on Medical Education, and of the Council on Health and Public Instruction. Some of the pamphlets and brochures published by the Association are also displayed. One of the effective features of the exhibit is that calling attention to certain facts relating to "patent medicines." This exhibit is for the purpose of presenting the truth to the public, rather than to the members of the profession.

Propaganda Department

The activities of the Propaganda Department of THE JOURNAL have continued during 1914 along the lines outlined in previous reports. There has been a steadily increasing interest on the part of the general public in this educational work of the association relative to frauds in medicine. During the year the Propaganda Department received and answered nearly five thousand inquiries relative to "patent medicines" and allied subjects. The interest of the public in the subject is further evidenced by the activities of various organizations, such as state and municipal boards of health, civic organizations, women's clubs, newspapers and magazines. Many of such agencies have been active in disseminating to the public, during the past year, information on the subject of nostrums and quackery furnished by the Association. The Associated Advertising Clubs of the World have continued to call on the Propaganda Department for information relative to the claims made by various advertisers; individual newspapers and magazines have also cooperated. The former organization has purchased a number of lantern slides issued by the Propaganda Department, illustrating the various phases of the nostrum evil. We understand that these slides are used by the various vigilance committees of the Associated Advertising Clubs of the World in different parts of the country. There has been an increasing call for these slides for lecture purposes on the part of both state officials and organizations interested in public health. In collaboration with the Association's laboratory, the Propaganda Department more than two years ago prepared some educational posters for an exhibit which the Association made at the Fifteenth International Congress on Hygiene and Demography. Requests for copies of these cards were so numerous that it was not long before the supply printed at that time was exhausted. During the past year the Propaganda Department has prepared additional cards so that now there are some thirty different posters. The demand for these has been gratifying. Some of the organizations that have used, or are using, these cards are: Department of Health, New York City; Department of Health, State of Iowa; Kansas State Board of Health; Board of Food and Drugs Commission, State of Rhode Island; Louisiana State Board of Health; North Carolina State Board of Health; Michigan State Board of Health; University of Missouri, School of Journalism; State Normal School, Westfield, Mass.; DeWitt Clinton High School, New York City; Springfield (Ill.) Tuberculosis Association; Charities Commission, LaSalle, Ill.; National Women's Christian Temperance Union; Southwestern State Normal School, California, Pa.; Eastchester Health League, Bronxville, N. Y.; and the Public Health Exhibit, City Club, Chicago. The pamphlets issued by the Propaganda for Reform Department are still doing effective work. There are now listed twenty pamphlets on medical frauds, dealing with two hundred and eighty-eight preparations and individuals.

Lawsuits

It is here proper that some reference be made to the various lawsuits to which the Association has been made a party through its altruistic activities in the interests of the public health.

In 1907 THE JOURNAL published an exposé, prepared by the Propaganda Department, of a fraudulent "consumption cure" operated by one O. E. Miller, a quack of international notoriety. As a result of this article a suit for $20,000 was entered against the American Medical Association and the editor of THE JOURNAL. It never came to trial and was finally stricken from the docket.

In 1909 the Council on Pharmacy and Chemistry published a report on "Certain Products of the Organic Chemical Manufacturing Company." Following this publication, two suits, each for $100,000, were entered against the American Medical Association and the editor of THE JOURNAL, one in the name of the Organic Chemical Manufacturing Company, and the other in the name of S. Lewis Summers, its president and chief owner. We have been thoroughly prepared to meet this case, but thus far it has never come to trial. Meanwhile, within the last few weeks, Summers has filed a new suit, under the "Antitrust Laws," in which the American Medical Association and the Chicago members of the Council on Pharmacy and Chemistry have been made co-defendants, and damages for $300,000 are asked. As the Association has been, for some time, thoroughly prepared to defend successfully the first two suits instituted by this concern, it is more than prepared to meet the last one.

In 1910, suit was entered against the editor of THE JOURNAL for $20,000 by the St. Louis College of Physicians. This has been removed from the docket.

In 1913 the Jenner Medical College, a fourth-grade school in Chicago, sued the American Medical Association, its secretary and some of the members of the Council on Medical Education for a half-million dollars. Nothing has been heard of this suit since it was filed.

The series of articles that THE JOURNAL published on the Friedmann Consumption Cure during 1913 resulted in five

suits being brought against the Association, each for $100,000. Nothing further has been heard from them.

On July 18, 1914, THE JOURNAL published in the "Propaganda for Reform" department an exposé of Wine of Cardui, a so-called "woman's tonic." This article was but one of scores of similar ones that have been published at different times for the purpose of giving the public the facts regarding fraudulent "patent medicines." Wine of Cardui is made by the Chattanooga Medicine Company, the chief owner of which, John A. Patten, was, at the time the article appeared, one of the most influential laymen in the Methodist Episcopal Church. Following the publication of the Wine of Cardui article, the Chattanooga Medicine Company and John A. Patten entered suit against the American Medical Association and the editor of THE JOURNAL for $300,000.

Last October the Louisiana State Health Train went from New Orleans to Richmond, Va., stopping on the way at various cities to give the public an opportunity to see the health exhibits. Among other places, the cars stopped for several hours at Chattanooga, Tenn. While there, Dr. Oscar Dowling, President and Executive Officer of the Louisiana State Board of Health, who was accompanying the train, was served with papers suing him for $25,000 damages for libel. The alleged offense was that, among other things, a card was displayed showing some facts regarding Wine of Cardui. The Louisiana State Board of Health officially endorsed its chief officer in the matter, and denounced Wine of Cardui as a fraud.

Since these suits were instituted, the enormous power wielded by the money obtained from the sale of this fraudulent nostrum has been evidenced in many ways. Though it is sold largely through the south and southwest to sickly women of the poorer and more ignorant class, those exploiting it have amassed fortunes and, apparently, are prepared to spend a fortune in defending the nefarious business. The owners of the Chattanooga Medicine Company loom large in the commercial life of Chattanooga. So great is the influence of the wealth of this concern that not only have business men of Chattanooga and vicinity apparently been afraid to express themselves regarding the discreditable business in their midst, but even some of the physicians of the locality seem to have come under the same blighting influence. In spite of the expense involved, the Association is prepared to demonstrate in court that Wine of Cardui is one of the most glaring frauds perpetrated on the sick women of the country. Moreover it will show in no uncertain way that the educational work of the Association in the interest of public health cannot be suppressed through the intimidation of "patent medicine" fakers whose fortunes have their foundations on the ignorance and credulity of ailing women.

Respectfully submitted,

	W. T. COUNCILMAN, Chairman,
M. L. HARRIS, Secretary,	OSCAR DOWLING,
THOMAS MCDAVITT,	PHILIP MARVEL,
W. W. GRANT,	PHILIP MILLS JONES,
FRANK J. LUTZ,	W. T. SARLES.

SPECIAL REPORT ON THE WORK OF THE COUNCIL ON PHARMACY AND CHEMISTRY

INTRODUCTION

Ten years ago the Council on Pharmacy and Chemistry of the American Medical Association was created for the purpose of abating or eliminating the evils connected with the exploitation of proprietary medicines. At its regular meeting last February, the Board of Trustees discussed the work of the Council and the completion of the decade of its existence. While it was appreciated that vast good had been accomplished, at the same time it was felt that the material results of the work have been far below what they should have been, considering the effort that had been expended. The reason was evident: the Council had not received the active, hearty support of the profession, individually and collectively, that it should have received. Specifically, the fact that more has not been accomplished is due to the indifference of the medical profession.

Your Trustees concluded that the matter must be definitely brought before you, the representatives of the American Medical Association. The Council on Pharmacy and Chemistry is your Council; the work it has done without pay has been your work, which you authorized and approved. Through it, the efforts of some of the leading members of the profession have been brought to bear on problems that vitally affect public health, morals and well being. The character of the work done has been made known through THE JOURNAL of the American Medical Association. The physicians of the country should now be asked: Do you wish this work continued? If not, thank the Council for its labors and disband it. If you think it should be continued, then you must give the Council practical and strong support; the fruit of the tree which they have planted and tilled must be more manifest. The Trustees feel that the general body of the medical profession should see to it that this work does bear fruit.

In this belief, the Board passed a resolution to the effect that the Chairman of the Board of Trustees appoint a Committee of three to prepare a supplemental report in the form of an address to the medical profession, on the use of secret and proprietary drugs and on the work of the Council on Pharmacy and Chemistry. This report was to be presented at the next meeting of the House of Delegates for approval, and each member of the House of Delegates was to be requested to sign it if the House approved it. It was also understood that if approved a copy of this address should be sent officially to the presidents and secretaries of the various constituent state associations and component county societies. It is in accordance with this action that the following report has been prepared and is here submitted:

REPORT

THE IDEALS OF THE AMERICAN MEDICAL ASSOCIATION

Medicine exists for the relief of humanity from the suffering entailed by disease. Its votaries believe that by the relief of disease and suffering man will advance to higher levels physically, morally and intellectually. This view, though always held, has become increasingly prominent through the greater possibilities of successful action which the modern knowledge of disease has given. Formerly almost limited to the service of the individual, medicine now seeks by measures looking to the prevention of disease, through the greater extension of hospitals and dispensaries, and through the education of the public in the care of their bodies, to extend its services to the mass of the people. The individual members of the profession are entitled to a fair pecuniary support for the service they render, but no one who is acquainted with the facts can deny that the medical profession as a whole, whether its work be in private practice, in hospital or state service, or in the laboratory, feels its first duty to be that of service to mankind. The association of its members in a body is primarily for the purpose of making this service more effective. This view cannot be too strongly emphasized, for if such is not the basic nature of this Association, then not only the work of the Council on Pharmacy and Chemistry, but most of the other work the Association is doing, has no purpose.

This wider view of the service of medicine has made it necessary for the Association, as a body, to oppose certain evil conditions that have arisen, which could not be successfully resisted by the separate action of the individuals. The most important of these evils is the commercial exploitation of the sick for the sake of pecuniary gain—and the most evident and extended form of this exploitation is to be found in the proprietary medicine business. Here the physician is often made an unconscious dupe and accessory to the exploiter. The best efforts of our Association, costly in both time and money, have been directed to an attempt to correct such abuses. Undoubtedly much has been accomplished, but the practical results do not seem in proportion to the efforts put forth. A brief review of the manner in which the proprietary evil has arisen will be pertinent.

DEVELOPMENT OF THE PROPRIETARY EVIL

First, it is interesting to note how rapid has been the advance in knowledge of disease and how recent the full recognition and application of this knowledge to its prevention and cure. Forty years ago the conditions of medical practice were essentially the same as at the time of Sydenham. We possessed a few great therapeutic agents whose use had been learned empirically, and which were often skilfully employed. Shortly before this period ether and chloroform had been placed in our hands. The anatomic knowledge of disease, which has made possible a closer differentiation of types and a clearer recognition of the changes produced in the body, was relatively further advanced than either functional or etiological knowledge. There was little recognition, save in a few great minds in the profession, of the true nature of disease. Disease was generally regarded as a condition foreign to normal life, as a new action which had come into the individual, and natural course was not understood. Treatment was largely symptomatic and remedies were sought to combat the symptoms rather than to meet the underlying causes. There is a natural feeling in the human mind that some remedy must exist against every evil. We see this in the numerous laws which are quickly passed to remedy unusual and abnormal conditions in the body politic and we too often see how obscure are the underlying conditions and how inadequate the remedy. Owing to the lack of appreciation of the natural course of disease, faulty empirical methods of treatment had arisen, many of them merely useless, some undoubtedly harmful.

Meanwhile, slowly and by short steps, a mass of knowledge founded on accurate observation of disease and irreconcilable with blind and unreasoning therapy was being accumulated. Homeopathy, which was spreading enormously, also showed the futility of much of the empirical therapeutics, since the sick, save in the case of a few diseases, did about as well under its negative ministrations as under the prevailing methods. A great voice had arisen in America—that of Jacob Bigelow. In 1835 he gave an address of which Oliver Wendell Holmes says: "This remarkable essay has probably had more influence on medical practice in America than any similar brief treatise, we might say than any work ever published in this country." Bigelow saw that the course of disease cannot be quickly curtailed; that some diseases run a definite course and the patients recover spontaneously; others persist to the end and are not influenced by therapeutic measures; and underlying most diseases there is a natural tendency toward recovery. One of the greatest advances was the conception of disease formulated by Virchow, whose definition of disease as "life under altered conditions" may be placed among the greatest of epigrams.

THE NEW CONCEPTION OF DISEASE

The final blow to the old conceptions of disease and to the old empirical therapeutics was given by the discovery that most diseases are due to the entry into the body of living things which prey on it and produce disturbances in its normal action. The year 1880, which marks the firm establishment of this new conception, is to be regarded as the beginning of one of the great periods of medicine—probably the greatest. What was previously a hypothesis became knowledge. The period was fertile in the discovery of new methods; bacteriology became a new branch of medical science, and in all directions the new knowledge was enormously stimulating. By the necessary association of the experimental study of disease with the determination of the part which the infectious organisms play, experimental methods received a new impetus and were carried to new fields. With the knowledge of the causes, and their mode of action, it became evident that disease could be more easily prevented than cured. Preventive medicine was born.

What was probably most important, the new knowledge had an immense human interest; it became popularized by means of newspapers and magazines, and for the laity as well as for the medical profession disease, for the most part, lost its mystery and became a part of the natural order of things. Since it is evident that only by the intelligent cooperation of the laity, can measures necessary for the prevention of disease be successfully introduced, the medical education of the laity was actively promoted by this Association.

In no direction was the influence of the new knowledge more marked than in pharmacology. Therapeutics had been based on a faulty and uncritical empiricism. It is interesting to look over one of the best-known books on therapeutics at this period (Bartholow, edition of 1882, for instance) and compare it with a modern book. It is excellently written, interesting, and contains much that is profitable; but of the physiologic action of drugs, to say nothing of their action in disease, there is very little beyond what is evidently conjecture. It is instructive to see how rationality of treatment is combined with knowledge of any particular disease. There were legions of remedies for those diseases whose nature was unknown, particularly if they were chronic. For epilepsy, melancholia and nervous diseases generally, pretty much everything in the Pharmacopeia could with advantage be employed. Certain drugs, as iron, arsenic, mercury and iodin, seemed to be prime favorites in chronic disease. Iron was so great a favorite that thirty-nine preparations were given, each of which was believed to have certain special advantages. The action of iron in producing an increase in red corpuscles was described, and this explained its efficacy in anemic conditions. There was a brave attempt throughout the book to give a rational explanation of the action of drugs and the classification given was based on their supposed action. Where all possibilities of explanation failed, the remedies were classified as "alteratives." The book, of course, was a compend, but here and there the author gives his own observations and experiments; the most evident lack in the author is the critical spirit. There were, however, no patent and no proprietary medicines mentioned in the book.

Laboratories for the study of the physiologic action of drugs, which is the basis of scientific therapy, were practically limited to those on the continent of Europe. In some of the few physiologic laboratories in this country experimental studies of the action of drugs were made, but there was no development of pharmacology as a branch of medical science. Gradually the strongest medical schools in this country began to create departments of pharmacology with adequate laboratory facilities and teaching—and productive research began.

LACK OF DEVELOPMENT OF DRUG THERAPY

It would naturally be supposed that this period[1] of great possibilities and promise for the future should have led to a rapid utilization of the new knowledge for the development of

1. While in every age the sick have been directly exploited for gain, this greatly increased in the period we have been discussing. The lowest form of illicit gain in which advantage was taken of the individual stricken with disease, practically the robbing of the wounded on the battlefield, became a successful and favorite pursuit. It was easy to reap a rich harvest by proclaiming to the poor sufferer that a certain remedy, often of mysterious character, would relieve him from all ills. The power of suggestion was utilized to the fullest extent. Symptoms were described in vague terms; simple physiologic conditions were described as symptoms, and it was easy to persuade the sick and even the well that they had the disease which the remedy cured. The newly awakened medical interest of the public was cleverly utilized in the advertisements, sometimes by partially truthful statements of the nature of certain diseases in order to explain the manner in which the supposed remedies would act in alleviating them; often every statement was false. The public undoubtedly appreciated that there were great changes in the treatment of diseases and the large number of individuals who are always suspicious of change were catered to by remedies described as "old and well-tried." The fact that disease was caused by germs led to the advertisement of remedies which destroy germs instantly, whether within or without the body. The cleverness of some of these advertisements is appalling; they are constantly in sight, in the newspapers, on the billboards, in the daily mail and in every way they seek to pierce the armor of common sense.

Against such exploitation the Association has waged vigorous warfare. The fraudulent character both of the remedies and of those exploiting them has been repeatedly shown up in THE JOURNAL, which for a long time waged the conflict single-handed, but at last received the powerful support of the lay press, to the eternal credit of the latter be it said. It must be understood in giving the press credit for this, that such support involved large financial loss from advertisements and some of the trenchant articles exposing medicinal frauds involved them in suits for damages. Now it may be said that most of the great papers of the country have purged their columns of these fraudulent advertisements. The United States Government lent its aid by means of the pure food and drug laws and by refusing to allow its mails to be used for furthering fraud. What has been accomplished in this regard alone is stupendous; it is no longer so easy for the patent medicine vultures to prey directly on the sick.

scientific drug therapy, but instead of advance there was halting and even retrogression. For at this very period there developed the great curse to American medicine—the blight of the nostrum. The country doctor no longer took with him in his saddle-bags a few reliable drugs with whose actions and limitations he was familiar, but ready-made mixtures about the composition of which he knew little and about the therapeutic actions of which he knew less, for all he knew was what was told him by the manufacturer, who in most cases was a layman, without knowledge of medicine, pharmacy or chemistry.

What were the underlying causes for the development of the proprietary medicine evil in this country? The period of its beginning was that following the Civil War—a period that found the medical profession in this country at a low standard of training. Low-grade medical schools sprang up to meet what was said to be the demand for physicians in the growing western and southern states. In addition to the schools already existing, from 1865 to 1905, no less than 198 medical schools came into being. Many of these had no laboratory equipment, and no facilities for medical training, the instruction consisting in courses of lectures by men who, themselves, were often imperfectly trained. The full course for the M.D. degree took only two years of five, six or seven months each. The course consisted of lectures only and in most schools the lectures of the first year were repeated in the second. While there is no doubt that among the graduates of these schools were men of ability, the average was low. It was impossible that such graduates should fully appreciate the value of scientific knowledge, or possess, to any large degree, the critical judgment that would permit them to discriminate between the biased, but plausible, statements of manufacturers and the accurate knowledge obtained by scientific methods of study.

Nor were the medical journals of the country more adequate to their task of leadership than were the medical colleges. Like the medical schools, the number of medical journals multiplied greatly during the forty-two years following the war; no fewer than 944 new journals were started in this period. Many of these were short lived but many survived; there are in existence now approximately 325 medical journals. Most of these publications were owned by individuals with small capital, receiving small subscription fees and drew their main support from advertisements. The publisher relied on the advertisements of proprietary medicines to such an extent that almost of necessity he became the tool of the manufacturers of these medicines. The most dangerous form of advertising consisted in recommendations by members of the medical profession. These took various forms, one, the favorite, being an article which on the face of it was a scientific contribution to the knowledge of some disease, but which in reality was written to extol some proprietary preparation. Some of these endorsements were undoubtedly honestly given, the judgment of the writer being at fault; others were entirely a matter of barter and sale, some men seeming to make these endorsements a part of their business. At best, all of them were based on uncritical data, and as scientific contributions were valueless.

RESOLUTIONS ACCOMPLISHED LITTLE

Against the exploitation of the medical profession by proprietary interests the Association had long made vigorous protest. The thinking members of the profession recognized the evil, and year after year resolutions were passed by the American Medical Association, calling on the profession for an enlightened stand on the subject, but no practical results were obtained. Discussion was rife, and agitation continued; but neither discussion nor agitation made any impression. Another step was necessary, and that step consisted in creating a body or agency of the Association for the purpose of dealing systematically and intelligently with the evil.

The Council on Pharmacy and Chemistry was the body created. It was the expression of an organized effort on the part of the medical profession of this country to counteract these evil influences. The preliminary plan of the Council was to investigate the composition and claims of the various proprietaries and to determine whether or not the statements made regarding them were true. The results of these investigations were published from time to time and the remedies which conformed to the requirements of honesty—that is, of the fundamental principles as expressed in the rules of the Council—were accepted for inclusion in the book, New and Nonofficial Remedies, which is revised annually.

The Council publishes facts concerning preparations which investigation shows to be exploited under false claims as to either composition or therapeutic action, or both. Reliable information has also been given out respecting many of the newer remedies which are not in the Pharmacopeia and yet are nonproprietary. These also are included in New and Nonofficial Remedies, and this work has helped to fix the standards for several drugs whose extensive use has prompted their acceptance for the next Pharmacopeia.

By the creation of a Committee on Medical Education, the Council has done much to advance the teaching of pharmacology and therapeutics. A decade ago there were hardly a dozen medical schools that recognized pharmacology as a branch of medical teaching; today sixty-seven colleges have whole-time teachers on this practical and important subject. Incidentally, the demand for trained pharmacologists[2] far exceeds the supply.

A Committee on Therapeutic Research was created by the Council some three years ago. This Committee, by awards and otherwise, fosters investigations concerning the activity, stability and physiologic action of commonly used nonproprietary drugs. The results of this work have appeared in various published papers and form valuable contributions to medical knowledge. It has thus far resulted in giving our profession actual facts regarding the action of many drugs, proving in some instances that drugs that have been in common use were practically valueless as therapeutic agents.

The Council has also undertaken the simplification of the materia medica. One of the serious handicaps to the study of this branch of medicine is the number of official and semi-official drugs, this number being so large that it is impossible for one individual to master even their names. A selection of a limited number of the better known and more valuable drugs has been made and these, with a brief exposition of their physiologic action and therapeutic uses, have been published in a book known as "Useful Drugs."

We call attention to these practical activities of the Council to emphasize the fact that this work is being done, and that the Council is not simply investigating and passing on proprietary medicines; its functions have broadened out from its earlier, almost wholly critical, work; it has become decidedly constructive in its efforts, and for this reason, if for no other, should have the hearty cooperation, assistance and support of the profession.

The influence of the Council in the ten years since its creation has been enormous and this influence has extended to Europe, particularly to England and to Germany. It has checked, if not stopped, the successful introduction of the fraudulent or unscientific proprietary mixtures that so long

2. One of the greatest needs in this field, however, is the establishment of institutes where pharmacologists would have real opportunities and real facilities for the prosecution of studies which might lead to the discovery of drugs of value; practically no work of this character has been undertaken in the United States and practically no facilities for such work, involving as it does the combined activities of well-trained chemists and pharmacologists, exist. In some European countries such opportunities have, in a measure, been secured by the cooperation of university or other laboratory workers with aniline dye and other chemical factories; occasionally the results have been in the main satisfactory as in the case of salvarsan. Too often, however, the result has been the exploitation of some semisecret or dangerous or otherwise questionable product with the name of some well-known man connected with it; for example, the pharmacologist Cloetta's name is connected with "Digalen," that of the surgeon Kocher with "Yoduglen," and that of the internist Zuelzer with "Hormonal." Most of the attempts to discover new drugs will inevitably result in failure; the medical profession in its whole history has found only a score or so of really great drugs; Ehrlich seems to have had at least 605 failures before approaching his goal. One of the greatest objections to commercialism in this field is that so many of the failures are exploited and capitalized as well as the successes. How few of the almost innumerable drugs which have been introduced in the last two or three decades have survived more than two or three years! During this brief period, however, they were actively exploited and often accomplished their purpose; they were sources of great profit to their owners. It is only from laboratories free from any relation with manufacturers that real advances can be expected.

disgraced American medicine. It has diminished the hitherto vast number of valueless synthetics, simple mixtures masquerading as synthetics, and other worthless European products on the American market. As already stated, the importance of pharmacology has been recognized in our medical colleges, partially, at least, through the Council's efforts. As a result, the young men who now enter the medical profession are no longer the easy prey of the unscrupulous, as was formerly the case. The Council has fearlessly shown up the fraudulent and injurious character of many of the nostrums that have been advertised to physicians. It has placed at the service of the profession a vast amount of accurate and scientific information regarding the manufacture and exploitation of drugs, based on experimental evidence which can be repeated and verified. In a word, it is no longer necessary for the practitioner to accept the extravagant statements of a manufacturer or promoter of a drug; he can now know the actual facts.

THE COUNCIL THE PROFESSION'S CREATURE

This Council on Pharmacy and Chemistry you, the medical profession, have created; its work is yours, and you have, passively at least, given it your endorsement and approbation. The malicious libel of the manufacturing interests to the contrary notwithstanding, the Council does not represent, and never has represented, the efforts of a clique, a small portion of the American medical profession. The Council's work is but carrying out the ethical ideals of a united profession. For ten years this work has gone on and the Council has borne the odium, the abuse and the opposition which its activities have created. It has done this without pay, and at a sacrifice of time and energy which might have been used to great personal advantage to the individual members. And yet the results accomplished are far from what they should be. Even today our profession is tolerating, and thereby recognizing, so-called "ethical proprietaries" that are as fraudulent as many of the "patent medicines" we so frequently—and justly—condemn and criticize. The remote reason for this state of affairs is inertia of the medical profession; the immediate cause the subserviency of the medical press to the proprietary interest—instead of supporting the Council's work, a large proportion of the medical journals of the country opposes it either passively or actively.

As already stated, the two main factors responsible for the development of the conditions we are discussing have been (1) the large number of inefficient, inadequately equipped medical colleges; and (2) the superabundance of medical journals. The medical college problem has been practically solved; few of the low-grade, commercial institutions remain. The situation with regard to medical journals, however, is but slightly improved; the number is far beyond the legitimate needs of the profession and more than the profession can support, or should be asked to maintain. Not a few of these journals were actually started for the purpose of exploiting the products of certain concerns; a large proportion depended, and still depend, for the greater part of their income, on the receipts from advertising. And the major portion of the advertising space in many of these journals is devoted to promoting nostrums.

Today we have this anomalous condition: The medical profession, through its authorized agency (the Council), has shown certain medicinal preparations to be fraudulent; the same medical profession, however, is supporting medical journals that are promoting these very preparations and in some instances accepting advertisement which the lay press rejects as fraudulent. The condition is not only anomalous—It is ridiculous. The Council on Pharmacy and Chemistry has presented indisputable evidence, has submitted demonstrable facts, to prove that certain products are frauds on the medical profession and on the public; at the same time medical journals, through their advertising pages, are sharing in the profits that come from the continued exploitation of these very frauds. Let it be emphasized that the nostrum evil, whether we apply the term "nostrum" to "patent medicine" or to so-called "ethical" proprietaries, depends for its life on advertising; cut off its advertising and it will die. Medical journals that lend their pages to the exploitation of medicinal frauds are responsible for one of the greatest curses that afflict the medical profession, and through it the public.

The remedy is in the hands of the physician. The physicians who subscribe for or contribute to a medical journal are, to a certain degree, responsible for what appears in that journal, for without their support it could not exist. It must be remembered that some of our leading journals are owned and published by laymen. Naturally, the interest of these publishers in the medical profession and in scientific medicine is commercial and not professional. Naturally, too, their point of view is different from that of physicians. Having no knowledge of medicine, these laymen cannot judge of the character of the medicinal preparations they advertise. If their readers, who are supposed to have a knowledge of therapeutics, do not object to the advertising of certain products, it is hardly to be expected that the publishers will do so.

MEDICAL JOURNALS WILL LISTEN

We repeat: The remedy is in our own hands. If we protest often enough and strongly enough, medical journals will cease advertising these preparations—there is no doubt about this. You will be told that but for the money which these advertisements bring, it would be impossible to publish such and such journals. A poor argument! The medical or other journal which depends for its existence on money received for the promotion of a fraud does not deserve to exist. The elimination of the fraudulent proprietary will probably mean the elimination of a certain number of journals, as the introduction of a higher standard of medical education eliminated nearly one third of the medical colleges that existed ten years ago.

Possibly we have dwelt a little too much on the dark side of the picture. On the other side the Association has every right to be encouraged by what it has accomplished through the Council on Pharmacy and Chemistry. Among these we may mention the creation and stimulation of similar work in other countries. It has had great influence in the establishment of chairs of pharmacology with connected laboratories in the universities of this country. It has stimulated the teaching of scientific therapeutics. Directly and indirectly it has advanced medical science. It has exerted a wholesome influence on the medical journals, and has effected changes. As a matter of fact, a number of medical journals, aside from all but three of those published by state societies, have shown that it is possible to exist without depending on fraudulent advertisements. Among these might be mentioned the *Southern Medical Journal*, the *Cleveland Medical Journal*, the *Old Dominion Medical Monthly*, *Surgery, Gynecology and Obstetrics*, the *American Journal of Obstetrics*, the *Boston Medical and Surgical Journal* and the *American Journal of Medical Sciences*.

It must be fully understood that this work has for its primary purpose service to mankind; that against its continuance and extension powerful interests have been aroused; that combinations have been formed with almost unlimited funds to oppose it; that law supported by the arguments of the ablest legal talent in the country will be invoked to stop it; that it is not impossible the Association may meet great financial loss. On the other hand, the work in itself is right and we must advance in its prosecution supported by the courage which comes from well doing.

With this report the appended resolution is respectfully submitted.

Respectfully submitted for the Board of Trustees.

W. T. Councilman,
W. W. Grant,
M. L. Harris,
Committee.

Resolved, We, Members of the House of Delegates of the American Medical Association, believe that every effort must be made to do away with the evils which result from the exploitation of the sick for the sake of gain. Earnestly believing that the continued toleration of secret, semisecret, unscientific or untruthfully advertised proprietary medicines is an evil that is inimical to medical progress and to the best interest of the public, we declare ourselves in sympathy with, endorse and by our best efforts will further the work which has been and is being done by the Council on Pharmacy and Chemistry of the American Medical Association in the attempt to eliminate this evil.

Addenda to Trustees' Report

SUBSCRIPTION DEPARTMENT

The regular weekly issue of THE JOURNAL of the American Medical Association, from Jan. 1, 1914, to Dec. 31, 1914, inclusive, was as follows:

January 3	62,254		July 4	62,545	
January 10	62,157		July 11	62,554	
January 17	61,910		July 18	62,721	
January 24	61,418		July 25	62,811	
January 31	60,731				
		308,470			250,631
February 7	65,130		August 1	62,695	
February 14	60,193		August 8	62,772	
February 21	60,835		August 15	63,027	
February 28	60,224		August 22	65,196	
			August 29	62,700	
		246,382			316,390
March 7	60,874		September 5	62,519	
March 14	60,735		September 12	62,400	
March 21	61,018		September 19	62,479	
March 28	60,882		September 26	62,516	
		243,509			249,914
April 4	61,126		October 3	62,372	
April 11	61,031		October 10	62,347	
April 18	61,549		October 17	62,473	
April 25	61,603		October 24	62,522	
			October 31	67,619	
		245,309			317,333
May 2	61,713		November 7	67,227	
May 9	61,913		November 14	67,581	
May 16	70,301		November 21	64,783	
May 23	67,253		November 28	67,273	
May 30	67,253				
		328,433			266,864
June 6	67,713		December 5	70,592	
June 13	62,141		December 12	81,300	
June 20	63,049		December 19	76,710	
June 27	62,588		December 26	64,771	
		255,491			293,373

Total	3,322,099
Weekly average	63,887

During the year 1914 there were 3,546 names transferred from the Subscription to the Fellowship Department.

The weekly average number of subscribers for 1913 was 19,137; the average for 1914 was 20,212. This shows an increase of 1,075.

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL

This table gives the number of physicians (based on the fourth edition of the American Medical Directory) in the United States, the number receiving THE JOURNAL and the approximate percentage in each state. Copies to physicians in the United States Army, United States Navy, Public Health Service, etc., omitted.

State	Number Receiving JOURNAL	Physicians in State 4th A. M. Dir.	Approx. per cent. 4th A. M. Dir.
Alabama	592	2,518	24
Arizona	179	291	60
Arkansas	589	2,652	22
California	2,665	5,353	50
Colorado	751	1,782	42
Connecticut	733	1,630	45
Delaware	114	263	43
District of Columbia	650	1,421	46
Florida	482	1,177	41
Georgia	1,268	3,255	40
Idaho	209	446	47
Illinois	5,550	10,286	55
Indiana	1,587	5,001	32
Iowa	1,719	3,733	46
Kansas	1,005	2,340	44
Kentucky	912	3,621	25
Louisiana	649	2,030	32
Maine	436	1,200	40
Maryland	1,383	2,232	62
Massachusetts	2,957	5,798	52
Michigan	2,162	4,180	52
Minnesota	1,550	2,381	65
Mississippi	456	2,047	22
Missouri	2,142	6,224	35
Montana	306	578	53
Nebraska	819	1,867	44
Nevada	84	155	54
New Hampshire	286	705	40
New Jersey	1,282	3,012	43
New Mexico	186	447	41
New York	6,634	15,301	43
North Carolina	699	1,987	35
North Dakota	357	577	62
Ohio	2,909	7,912	37
Oklahoma	1,059	2,612	40
Oregon	506	1,150	44
Pennsylvania	5,537	11,611	48
Rhode Island	387	761	51
South Carolina	618	1,362	45
South Dakota	355	674	53
Tennessee	862	3,389	25
Texas	1,616	6,024	27
Utah	237	446	53
Vermont	256	685	37
Virginia	1,081	2,420	45
Washington	801	1,644	49
West Virginia	895	1,678	53
Wisconsin	1,568	2,737	57
Wyoming	106	237	45

The following table shows the number of Fellows and Subscribers for each year commencing with 1900.

Year	Fellows	Subscribers
Jan. 1, 1900	8,445	4,633
Jan. 1, 1901	9,841	8,339
Jan. 1, 1902	11,107	10,795
Jan. 1, 1903	12,553	12,378
Jan. 1, 1904	13,899	14,674
Jan. 1, 1905	17,570	15,698
Jan. 1, 1906	20,826	17,669
Jan. 1, 1907	26,255	20,166
Jan. 1, 1908	29,382	20,880
Jan. 1, 1909	31,999	18,983
Jan. 1, 1910	33,032	19,832
Jan. 1, 1911	33,540	20,504
Jan. 1, 1912	33,250	21,620
Jan. 1, 1913	37,493	19,863
Jan. 1, 1914	41,203	19,751
Jan. 1, 1915	42,956	20,430

TREASURER'S REPORT

Report of the Treasurer of the American Medical Association for the year ending Dec. 31, 1914.

1914

Jan. 2—Balance—Bonds, par value		$64,750.00		
Less amount over cost		936.25		
				$ 63,813.75
Certificates of Deposit		70,000.00		
Checking Account		5,773.72		
				$ 75,773.72
				$139,587.47

RECEIPTS

April 1—By Cash	Interest Bonds	$ 400.00		
May 1— " "	Editor and General Manager	20,000.00		
July 1— " "	Interest Bonds	962.50		
Oct. 1— " "	" "	400.00		
Dec. 31— " "	" " and Reserve Fund	1,725.00		
" " " "	" Bank Balance	249.29		
" " " "	" Certificates	3,677.49		
" " " "	Association Reserve Fund	55,018.75		
				$ 82,433.03
				$222,020.50

DISBURSEMENTS

Nov. 1—To Cash Requisition Editor and General Manager	$20,000.00	
Dec. 31—To Cash Association Reserve Fund	55,018.75	
" " —To Cash Accrued Investment Interest	867.63	
		$ 75,886.38
		$146,134.12

SUMMARY OF BALANCE

Association Reserve Fund	$118,832.50
Certificate of Deposit	20,000.00
Checking Account	7,301.62
	$146,134.12

DAVIS MEMORIAL FUND

1914

Jan. 2—Balance	$ 3,146.74		
July 1—By Interest	47.19		
Dec. 31— " "	47.89		
" " —Balance, Northern Trust Co. Savings Dept.		$ 3,241.82	

WM. ALLEN PUSEY, Treasurer.

AUDITOR'S REPORT

MARWICK, MITCHELL, PEAT & CO., CHARTERED ACCOUNTANTS
105 SOUTH LA SALLE STREET

CHICAGO, ILL., Jan. 18, 1915.

To the Board of Trustees of the American Medical Association, Chicago, Ill.

Dear Sirs:

In accordance with your instructions, we have audited the accounts of the American Medical Association for the year ended Dec. 31, 1914, and now submit our report thereon, together with the following statements:

Exhibits
"A" Balance Sheet as at Dec. 31, 1914.
"B" Income and Profit and Loss Account for the year ended Dec. 31, 1914.

Schedules
"1" Journal Expenses for the year ended Dec. 31, 1914.
"2" Particulars of Provision for Depreciation during the year ended Dec. 31, 1914.

The balance sheet as submitted herewith, Exhibit "A," in our opinion, correctly reflects the financial position of the Association as at Dec. 31, 1914, subject to provision for accrued taxes and Journal subscriptions paid in advance, less subscriptions and memberships due and unpaid.

The following is a condensed comparative balance sheet as at Dec. 31, 1914 and 1913:

Assets:	December 31 1914	1913	Increase	Decrease
Property and Equipment	$328,656.60	$337,971.16	.....	$ 9,314.56
Investments	138,832.50	133,813.75	5,018.75	.....
Current and Working Assets	75,849.62	50,804.03	25,045.59	.....
Prepaid Accounts and Reserves	4,794.56	3,807.38	987.18	.....
Medical Directory—Fourth Edition (Labor and Material)	.....	28,436.28	.....	28,436.28
Biographical Expense	.....	2,614.41	.....	2,614.41
Total Assets	$548,133.28	$557,447.01	$ 31,051.52	$40,365.25
Liabilities	123,287.59	17,185.43	106,102.16	$.....
Surplus	$424,845.69	$540,261.58	$.....	$.....

Assets:

Decrease	$ 40,365.25
Increase	31,051.52
Net Decrease	$ 9,313.73
Liability Increase	$106,102.16
Surplus Decrease	$115,415.89

The net income for the year ended Dec. 31, 1914, amounts to $3,984.59, particulars of which are shown in Exhibit "B."

The securities representing the investments of the Association were produced for our inspection and found in order.

We verified the cash on hand by actual count and the cash in bank by certificate obtained from the bankers, which we duly reconciled with the cash records.

The following is a summary of the cash on hand and in bank, exclusive of the insurance cash fund, which was verified by certificate obtained from the depository:

Cash on Hand	$ 1,939.17
Cash Fund	50.00
Continental and Commercial National Bank	5,899.81
First Trust and Savings Bank	7,301.62
Total	$15,190.60

EXHIBIT "A"

Balance Sheet as at Dec. 31, 1914

Assets

Property and Equipment at Cost, Less Depreciation:		
Real Estate and Buildings		$253,786.34
Machinery		48,363.90
Type and Metals		9,041.04
Furniture and Fixtures		14,619.76
Laboratory		1,614.14
Library		1,231.42
Total Property and Equipment, less Depreciation		$328,656.60
Investments:		
Association Reserve Fund	$118,832.50	
Certificates of Deposit	20,000.00	
		$138,832.50
Current and Working Assets:		
Inventory of Materials, Supplies and Work in Progress	$30,580.49	
Accounts Receivable:		
Advertising	$18,305.09	
Reprints	1,614.06	
Miscellaneous	2,866.57	
Cooperative Med. Advertising Bureau	1,666.24	
Directory—Fourth Edition	5,282.75	
	$29,734.71	
Notes Receivable	343.82	
Cash in Bank and on Hand	15,140.60	
Office Fund	50.00	
Total Current and Working Assets		$75,849.62
Liability Insurance Reserve—Cash in Bank		4,147.97
Prepaid Accounts and Accruals:		
Insurance	$ 460.61	
Session 1915	5.00	
Accrued Interest on Investments	180.98	
	$ 646.59	
Total		$548,133.28

Liabilities

Accounts Payable:		
Sundry	$ 460.79	
Cooperative Medical Advertising Bureau	1,228.25	
	$ 1,689.04	
Advance Payments on Publications	2,766.05	
Association Reserve Fund	118,832.50	
Surplus:		
As at Dec. 31, 1913	$420,861.10	
Net Income for the year ended Dec. 31, 1914	3,984.59	
Total Surplus		$424,845.69
Total		$548,133.28

EXHIBIT "B"

Income and Profit and Loss Account for the Year Ended Dec. 31, 1914

JOURNAL:

Income:

Membership Dues	$ 41,724.85
Subscriptions	248,088.55
Advertising	203,993.66
Jobbing	3,679.93
Books	6,033.94
Reprints	2,277.45
Buttons	291.97
Miscellaneous Sales	4,504.98
Interest	829.38
Children's Journal	44.66
Directory—Fourth Edition	287.53
Total Income	$511,756.90

Expenses:

As per Schedule "1"	$408,062.09
Provision for Depreciation—Schedule "2"	21,528.00
Loss on Bad Debts	3,680.70
Total Expenses	$433,270.79
Net Income—Journal	$ 78,486.11

ASSOCIATION:

Expenses:

Propaganda	$ 8,771.27
Association	14,704.19
Health and Public Instruction	22,107.43
Chemical Laboratory and Pharmacy and Chemistry	13,583.03
Medical Education	9,027.71
Organization	10,215.92
Therapeutic Research	1,519.04
Session 1914	2,357.56
	$ 82,286.15

Less:

Interest on Bonds	$2,800.85	
Interest on Treasurer's Account	3,326.78	
Rentals	1,657.00	
	$ 7,784.63	
Net Association Expenses		$ 74,501.52
Net Income for the year		$ 3,984.59

SCHEDULE "1"

Journal Expenses for the Year Ended Dec. 31, 1914

Wages and Salaries	$148,112.59
Editorials, News and Reporting	10,152.78
Paper—Journal Stock	120,837.20
Paper—Miscellaneous	4,175.76
Electrotypes	5,238.01
Binding	118.67
Ink	3,987.54
Postage—First Class	16,801.85
Postage—Second Class	26,559.92
Journal Commissions	11,323.57
Collection Commissions	3,701.85
Discounts	3,607.64
Express and Cartage	2,911.27
Exchange	1,714.40
Office Supplies	675.93
Telephone and Telegraph	828.07
Office Jobbing	2,881.11
Miscellaneous	5,291.36
Power	2,579.30
Light	905.28
Fuel	2,271.86
Factory Supplies	3,874.76
Insurance and Taxes	5,452.42
Legal	4,408.97
Repairs and Renewals—Machinery	5,170.62
Repairs and Renewals—Buildings	1,437.32
Archives	958.02
Biographical	9,446.41
Cooperative Medical Advertising Bureau	2,617.61
Total	$408,062.09

SCHEDULE "2"

Particulars of Provision for Depreciation During the Year Ended Dec. 31, 1914

Property and Equipment	Rate	Amount
Building "A"—Old	5 per cent.	$ 859.54
Building "B"—New	2.5 per cent.	4,611.55
Machinery	20 per cent.	12,090.98
Furniture and Fixtures	10 per cent.	1,707.99
Type	15 per cent.	831.70
Metal	20 per cent.	1,082.00
Factory Fixtures	15 per cent.	664.90
Laboratory Equipment	10 per cent.	179.34
Total Depreciation		$21,528.00

We found proper vouchers on file for all disbursements and we made an exhaustive test of the various sources of income for the period.

The operations for the year have been charged with $3,680.70 in respect of bad debts.

We found the accounting records in good order and well and accurately maintained.

In conclusion, we desire to express our appreciation of the courtesies extended to our representatives during the course of the examination. Yours truly,

Marwick, Mitchell, Peat & Co.,
Chartered Accountants.

Report of the Judicial Council

Dr. Alexander R. Lambert, New York, Chairman, read the report of the Judicial Council, as follows:

To the Members of the House of Delegates of the American Medical Association:

The Judicial Council desires first to call the attention of the House of Delegates to some necessary changes in the By-Laws:

HONORARY FELLOWSHIP

The wording of Section 8, Chapter XI of the By-Laws and of the second paragraph of Section 4, Chapter IV conflict. The first directs that "each section at each Scientific Assembly may at the time of the election of its officers nominate for honorary fellowship, etc." The By-Laws, Section 3, Chapter XI, fix the time for this election as the first order of business of the morning meeting of the section on the third day (Thursday) of each Scientific Assembly. In Section 4, Chapter IV, the By-Laws state that "nominations for honorary fellowship shall be made by the sections and must be submitted to the House of Delegates not later than the second day of the Scientific Assembly (Wednesday). It is evident, therefore, that if these By-Laws are strictly followed, it will be impossible to elect any Honorary Fellows. The Judicial Council would recommend that from Section 8, Chapter X, the words "at the time of the election of its officers" be deleted from the first section of the sentence and that there be added immediately after the first section of the sentence a new section as follows: "Provided, however, that nominations for honorary fellowship in the American Medical Association shall be acted on by the sections on or before the second day of each Assembly," so that the entire section shall read:

"Each section at each Scientific Assembly may nominate for Honorary Fellowship in the American Medical Association a physician of a foreign country who has risen to preeminence in the profession of medicine, provided, however, that nominations for Honorary Fellowship in the American Medical Association shall be acted on by the sections on or before the second day of each Scientific Assembly. The secretary of the section shall immediately notify the Secretary of the Association of such nomination."

MEMBERSHIP IN AN ADJOINING STATE

The attention of the Judicial Council has been called to the fact that in certain instances members of the organization who are located near the border of a state find it convenient to hold membership in the component society of the state adjacent to that in which they are located for the purpose of practicing medicine. It is a common practice among the constituent state associations to permit a man who resides near a county line to hold membership in the component society of the county adjacent to his place of residence, when the individual can more conveniently attend and take part in the meetings of the local society of the adjacent county than he can the meetings of the component society of his own county, provided it is agreeable to the organization in his own county for him to hold membership in the organization in the adjacent county. It has been suggested that this same privilege, under proper restrictions, might with propriety be accorded to members living near state boundaries. The Judicial Council, therefore, recommends to the House of Delegates that the following sentence be inserted immediately before the final sentence in Section 3, Chapter VIII, of the By-Laws:

"and provided further that members of a constituent state association who are located for the purpose of practicing medicine in a state adjacent to that through the association of which they hold membership in the American Medical Association, may be continued as members of the American Medical Association, provided the Council of the medical association of the state in which they are practicing medicine waives jurisdiction over the membership of the individual member who holds his connection with the organization through a neighboring constituent state medical association."

ORGANIZATION

In Section 5, Chapter VII, of the By-Laws, it is stated that the work of the Council on Health and Public Instruction shall embrace "(*b*) organization." The Judicial Council would recommend to the House of Delegates that the above-quoted phrase be stricken from the By-Laws assigning the work embraced by the Council on Health and Public Instruction and that the succeeding subjects be relettered. The present wording of the By-Law gives the work of the organization of the American Medical Association to the Council on Health and Public Instruction, although as a matter of fact the duties of the organization belong to the Secretary of the American Medical Association. The Judicial Council believes that the By-Laws should be made to agree with the existing organization of the American Medical Association, and therefore makes the foregoing recommendation.

PROCEDURE IN PREFERRING CHARGES

In the correspondence brought to the attention of the Judicial Council for its consideration, there have been an increasing number of charges of various offenses made against Members and Fellows of the Association. It is apparently accepted in the minds of many members of the Association that the Judicial Council can act both as policeman and court, and that if information is furnished to the Council of breach of ethics, of fee splitting, of gross advertising or other wrong doing, the Judicial Council will be able to accuse the individual complained of this same wrong doing, hail him before them, and act both as accuser and judge. This is manifestly impossible. No individual so far has been ready or willing to back up the accusations made by preferring charges or registering a formal complaint. The secretary of the Judicial Council must perforce, in accordance with his duty, present this correspondence to the Judicial Council. It can be readily understood that in any given community an individual cannot make charges as an individual without serious detriment to himself which a person in official position can make as an impersonal official. It would seem wise, therefore, that the House of Delegates should consider the passing of a standing rule by which it would designate a method of procedure by which the American Medical Association may protect its Fellowship through the Judicial Council when any Fellow is guilty of some overt act. In the present organization of the American Medical Association and its Judicial Council, the secretaryship of the Judicial Council is filled by the secretary of the American Medical Association, and while these two secretaryships are held by the same individual, the two official positions must be considered as much apart as if they were occupied by two separate human beings. The Judicial Council would suggest to the House of Delegates that in the opinion of the Judicial Council it would be wise for the House of Delegates to enact a standing rule directing the Secretary of the American Medical Association to file charges against Fellows of the Association when overt acts on the part of such Fellows, supported by reasonable evidence, are brought to the attention of the Secretary of the American Medical Association.

COMMISSIONS FROM MAKERS OF INSTRUMENTS

The Judicial Council desires to report the results of a special investigation made in regard to the demand by surgeons or physicians for commissions from makers of surgical appliances such as trusses, artificial limbs, belts, etc. This investigation has revealed a condition which is a disgrace to the medical profession. Some firms justify this procedure; other firms are chafing under it and indignantly protest against what they consider dishonest practice among the profession. They cannot cease to give the commissions when asked, because their competitors will not agree to refuse these same commissions to the same physicians. Each firm is, in their opinion, forced to continue this practice.

Opinions vary among the dealers as to the localities in which the practice is most prevalent: some claim it is more prevalent in the West than in the East, while others claim it is most prevalent in the big cities of the East; some firms

claim it is generally practiced throughout the entire country in all localities. One firm frankly admits that in the majority of sales, commissions are paid; another that these commissions are paid in 95.12 per cent. of all orders from physicians. The following quotations are from a letter of a well-known and reliable firm doing business over a wide area of the United States:

"The majority of physicians expect commissions to be paid them on sales to their patients. Some physicians do not expect it and generally condemn the dealer for giving commissions. This we believe to be an entirely wrong position to take in the matter, for the blame, if any, should not be placed upon him. . . . We do not pay commission except to physicians who request the same. As far as we have been able to learn, all of our competitors pay commissions. If a commission is asked for, we pay it on the first order only, counting on satisfying the customer so he will return for repeat orders on which no commission is paid. In this way it is no additional tax on the customer but comes out of our profit and in many cases represents our entire profit on the first order. Business ethics require the giving of commission to those who send trade. As long as the majority of physicians ask for commission, and among them are many of the best standing in the community, it is impossible for us to consider that medical ethics are against this custom. We approve of the position taken by physicians who do not accept commission, except that they seem to blame surgical appliance dealers for this condition, whereas we are looking forward to the time when it can be discontinued. The time has not yet arrived as it would drive us out of business. There would be no harm in physicians taking commissions under the conditions described above if it could be done openly. Our objection to the present custom and reason for wishing a discontinuance is, that the medical profession openly claim it is wrong, yet privately demand it. Another objection is that the accepting by some under fair conditions encourages others to seek unfair commissions."

Another firm says, "When we first started to make surgical supports, we never received requests for commissions in the small cities and towns, but the evil is growing there. Where we have no representative and the physician wishes to order our support, it is necessary for him to do some clerical work and to give some time, which we think should be paid for, as our representative should be paid for her time in handling the order. Where we have a representative, and the physician asks for a commission simply because he refers the patient to us, we regard it as graft pure and simple."

Another firm says, "We believe that the practice of paying or receiving commissions, either from a business or professional standpoint, is radically wrong and dishonest. The commission is paid indirectly by the purchaser and not by the manufacturer. In order to secure a legitimate profit the manufactured article must necessarily be cheapened in its construction to the amount of the commission. The practice cannot be maintained except by false pretenses and deception."

It is evident that the majority of dealers realize that it is a secret rebate unjustified by facts or morals. It is a dishonest endeavor on the part of the physician to obtain in an indirect manner more money from the patient who purchases the appliance. If a physician measures his patient for an appliance, thus rendering a service to that patient, he renders a service which is necessary for the perfect fit of that appliance to the patient, and the patient should pay him for time, knowledge and work done. To turn and to use the trade idea that all who bring business are justified in demanding a commission is to stoop to a secret and demeaning method of obtaining double fees. It is analogous to a man demanding commissions from both the buyer and the seller of a piece of property. This is not tolerated legally. Physicians cannot be partners in the business houses of instrument makers nor honorably act as their sale agents when dealing with their own individual patients, and cannot, therefore, ethically partake of the profits in the manufacture and sale of their goods. They cannot, therefore, honorably receive a secret rake-off from the instrument maker for goods sold to any patient. If it were an honorable thing to do, it would not be done in secret and unknown to the patient; it would then be a regularly recognized partnership and openly justified. It is the same as the dishonest secret division of fees and must so be considered. The remedy for this condition lies in the hands of the physicians or surgeons who order the appliances or instruments. They must demand recompense from the patients and not from the instrument makers for the time and knowledge necessary for the accurate measuring of patients for appliances. When the physician fails to charge the patient for this work and expects to obtain recompense from the instrument maker for so doing, he is demeaning himself and stooping to a dishonorable, because secret and dishonest, practice.

MEDICAL DEFENSE

It has been suggested to the Judicial Council that it recommend that the American Medical Association take up the defense of its members against malpractice and that the Association should undertake such insurance work. These functions, in the opinion of the Judicial Council, come under the head of benevolent functions and are in the same category as the suggestion last year that the American Medical Association should supply funds for the support of widows and orphans of physicians. The Judicial Council again reiterates its opinion that benevolent work should be confined to the constituent associations of the national body and should be done by the state and county associations. Benevolent functions of an association deal with the individual and each case must be judged individually. For this reason benevolent work should be left to the constituent bodies, as they have the most accurate knowledge and are best able to judge of the worthiness of each individual case. These benevolent functions should not be undertaken by the national body.

DISCIPLINE OF FELLOWS

The Judicial Council regrets to report that during the past year its duties included taking action in two cases. In the first case, charges were duly presented and sustained proving that the accused had persisted in grossly advertising in the public press. No defense was offered in person or by writing, notwithstanding formal notification of the charges preferred and the date of the meeting of the Judicial Council at which these would be considered had been forwarded to the defendant. The decision of the Judicial Council was that the charges were sustained and that the name of the offender should be dropped from the Fellowship roll of the American Medical Association. In the second case, charges were brought before the Council that the accused had caused or permitted to appear in a publication, with which his name was connected, photographs and an article which violated the Principles of Medical Ethics in that they were self-laudatory and defied the traditions and were contrary to the ideals of the medical profession. The Judicial Council condemned the publication in question as being offensive and in bad taste, but because it was evident from the testimony that the publication complained of was not, in this instance, intended by the accused to be self-exploiting advertising, the Council accepted the defendant's explanation and apology.

Workmen's Compensation Laws

In pursuance of its functions to investigate general professional conditions, the Judicial Council considers it a duty to bring before the Fellowship of the American Medical Association a report of certain economic conditions that are arising in this country in connection with the various workmen's compensation laws that are being passed in the different states. Some form of workman's compensation law has been already passed in more than half the states in the Union, and there is small doubt that before long such laws will have been passed in the majority of the states if not in every state. The passing of these laws does not mean that some new or special law has been passed to compensate an injured workman under the old common law system, but it means an entirely new legal and social conception of compensation for injury and is, in fact, the beginning of a new social and economic condition in this country. These new economic conditions affect very materially the medical men in a community. It is certain to bring up the questions in new forms of contract and lodge practice, of health and accident

insurance, of state aid and state medicine. It will also affect the relationship between the boards of trustees and the attending physicians and surgeons in private and municipal hospitals. Economic changes such as these must be of concern to the general profession, and the Judicial Council feels that it is timely to describe in general what these workman compensation laws are and what are their social and philosophic foundations, and what the trend at present seems to be in their relation to the profession.

EFFECT ON THE MEDICAL PROFESSION IN EUROPE

To show this clearly it will be necessary to describe briefly similar laws and the effect of such laws in Germany, England and other countries of the Old World which have long since possessed them. The experiences gained by the medical profession under the economic changes which these laws have brought about in England and on the continent cannot fail to be of value to the profession in the United States, if the profession is alive to the changes which are coming about and are willing to learn from the experience of others and take advantage of the knowledge so gained.

Seventy-five years ago, when the industries were small in this country and when the relationship between employer and employee was very personal and the forces in use to run the industries of the country were relatively simple under the common law, the legal decisions regarding compensation of workmen injured and the possibility of recovery of damages began to be laid down by the courts following the old English customs. A workman could recover damages if he could prove that his employer had been negligent, but if the injury was due to his own fault, he could not recover. Moreover, by accepting employment, he assumed whatever risks were inherent in the pursuit of his calling. A decision was soon made in the courts that if the negligence of a fellow servant was the cause of the injury, the employer was not responsible and the injured employee could not recover. As industries became more complex, as the relation between employer and employee became more distant, as the interrelationship of various fellow-servant employees became more intricate, there grew up ever increasing possibilities of combinations of legal technicalities by which the employer could evade the responsibility of injury suffered by the workmen and an ever-increasing impossibility by which the employee could recover even when he well deserved compensation for injuries received. The verdicts from juries varied between refusal to give even just compensation and the lavish pouring out of sympathy by granting a huge verdict for a relatively minor injury. The slow process of legal action in the courts rendered the time between injury received and compensation given so long that destitution often overpowered the injured workman in the process of obtaining his rights. All this has engendered bitterness between employer and employee and at the same time has thrown on the workman more than his share of the burden of both the avoidable and unavoidable accidents which have resulted in temporary injury, permanent invalidism and death.

This is well illustrated by the following extract from the report of the Workmen's Compensation Commission of Missouri:

"Statistics show that in each industry every year there is bound to be a certain number of employees killed, a certain number will have their fingers, or their hands, arms or legs cut off, and a certain number will be otherwise injured. It is just as much an incident to the manufacture of a product that men will be killed and injured as it is that machines will be destroyed or damaged, or mules killed or injured, and the injuries of men go into the product as much as the injuries to plant and equipment. Yet, when a machine has to be repaired or sold for junk, the employer charges it as a cost item, and the consumer pays for it, and no one ever stops to ask whether the damage was caused by the negligence of the employer or the consumer, or whether the machine or the consumer was guilty of contributory negligence. The breakdown was treated as an accident and an incident to the business. If a team of mules runs away and breaks the driver's leg, smashes the wagon, kills one of the mules and badly bruises the other, the employer repairs the wagon, buys a new mule, gets a veterinary surgeon for the other and feeds him until he gets well, and adds all these charges as cost items in the price of the product and the consumer pays for them, not because the consumer or the mules or the wagon, or even the employer, were negligent or guilty of contributory negligence, but because the accident was an incident to the industry and a certain number of such accidents are sure to happen every year. It is just as inherent for accidents to happen in an industry as it is for mules to run away. But the driver, not being a wagon or a mule, pays his own doctor's bill and loses his wages until he gets well, because, in the case given, he can show no negligence on the part of his employer. His injury was just as much an incident to the industry as was the injury to the wagon and mules, but the employer and the consumer do not have to pay for the driver's injury. Perhaps on the theory that the mules were fellow servants of the driver and that his injury was caused by the negligence of the mules in running away."

NEW LAW BASED NOT ON FAULT BUT ON FACT

In recent years there has been an increasing tendency to break down the barriers protecting the employer and to throw more and more the responsibility for the injuries received in industry on him, until finally the European conception, years ago adopted in many countries, has been accepted in these workman's compensation laws, replacing the former common law system by a law based not on fault but on the fact of injury resulting from accident in the course of the employment, recognizing that injuries to workmen under existing conditions should be regarded as risks of the industry. That is, the human wastage of injury, invalidism and death should be classed in the same category as the wear and tear of other necessary means of production and should be paid for by the industry which produces the wastage. If paid for by the industry producing this human wear and tear, it is paid by those who use the products of the industry. Heretofore the injury has been produced, and besides the injured workman, society at large by charity and taxation for municipal care, has borne in great measure the expense of the element of human injury.

The trend of thought in the United States has always been strongly individualistic. This is but natural, for the eastern borders of the United States were settled by men who were willing for the sake of freedom of ideas to leave what was then civilization and comfort and strike out into an unknown wilderness to obtain freedom of thought, or else it was settled by those who, through spirit of adventure, eagerly sought in a new world a bettering of their fortunes. Such life as this appealed only to those of strong individual thought and action. The civilization thus formed crept westward across the Apalachian Mountains, down the Ohio River and on down the Mississippi, thence slowly westward across the great plains. When, in the last century, the lure of gold developed the settlement of the Pacific Coast, again this civilization pushed slowly eastward until the two frontiers of western and eastern civilization met. But this development and spread of civilization demanded rugged individual traits. It imbued into its men a sense that they must take their own individual risks and it did not quickly generate a communal sense which was necessary for the development of the social laws which have grown up and been adopted in Europe so many years ahead of their adoption in this country. It is for the foregoing reasons in a large measure that only recently in this country has capital as a whole felt responsibility toward labor, and only recently has the sense of interdependency one on the other developed fully until finally it has rapidly been recognized in the separate states that the economic loss produced by human injury, invalidism and death of the workmen of an industry, with its consequent production of poverty and destitution in the community, should be paid for by the industry and transferred by the employer to the purchasers of the manufactured product and not borne alone by the workman or by all members of a community.

INSURANCE PRINCIPLES APPLIED

In considering how best to accomplish these results, the ideas of insurance which have developed so enormously in the taking of risks on human existence and of risks against fire and other calamities are those which most readily occur to solve the problem of injury, death and calamity in the industrial fields. That is, many individuals are willing to put a relatively small amount in a common fund that the few individuals on whom calamity falls may have a relatively large sum to compensate them for the loss by the calamity, all realizing that in any one year it cannot be foreseen on which individual the calamity will fall and all forced to take a chance on whom it may fall.

EUROPEAN SOCIAL INSURANCE

Before considering the different methods of workman's compensation against accidents in the various states in the Union, it would be well to consider what has been accomplished in Europe under these social insurance laws. Not all countries have adopted similar laws or have reached the same complete scheme of social insurance. Most countries have developed it much further than has yet been done in the United States and, as we shall see, usually starting with the workman's compensation against accidents, there has been almost always the further development of sickness and funeral insurance, maternity insurance, old age pensions, the pensioning of widows and orphans, and even, as in England, a national unemployment insurance. Rubinow, in his book on "Social Insurance," gives the order in which the various countries have fallen into line as follows:

Germany, 1884; Austria, 1887; Hungary, 1891; Norway, 1894; Finland, 1895; Great Britain, 1897; Denmark, Italy and France, 1898; Spain, New Zealand and South Australia, 1900; Netherlands, Greece and Sweden, 1901; West Australia, Luxemburg and British Columbia, 1902; Russia and Belgium, 1903; Cape of Good Hope and Queensland, 1905; Nuevo Leon (Mexico), 1906; Transvaal, 1907; Alberta, Bulgaria and Newfoundland, 1908; United States, for federal employees only, 1908; Quebec, 1909; Serbia, Nova Scotia and Manitoba, 1910; Switzerland and Peru, 1911; Roumania, 1912; about twenty-six states of the American Union, 1911-1913.

It was not a sudden development in many of these countries, because for many years these compensation laws were under discussion before they were adopted. In France, Sweden, Norway and Russia the subject had been agitated and under discussion as early as 1881, although not adopted until years later. At present the situation seems, again according to Rubinow, best summed up by saying that accident compensation or accident insurance has been established practically throughout Europe and in many British colonies. Compulsory sickness insurance has been introduced in about one half of the large countries of Europe, namely, Germany, Austria, Hungary, Norway, Great Britain, Serbia and Russia, and voluntary subsidized sickness insurance in France, Denmark, Sweden and Switzerland. Compulsory old age insurance exists in Germany, Luxemburg and France, and old age pensions in Denmark, Iceland, Great Britain, France, Australia and New Zealand, and voluntary subsidized state systems of old age insurance in Italy, Belgium, Serbia and Spain. Unemployment insurance by means of subsidies to workmen's voluntary organizations is rapidly spreading in large European cities and exists by national law in Norway and Denmark; the first compulsory unemployment insurance system has been established in Great Britain, and the first beginning of a national system of widows' and orphans' pensions has been made in Germany.

ACCIDENT INSURANCE

There are several methods by which the accident insurance of the various countries is put into practical effect. In Germany there is compulsory insurance in which all employers of the same industry are forced into mutual insurance associations. This plan is also followed by Austria, Luxemburg, Italy and Hungary, although there are differences in important details from the German system. Norway and the Netherlands have a compulsory state insurance. Under this plan the employer must insure his employees through the State Insurance Department, which fixes the premiums and pays the indemnities prescribed by law to those entitled to them. In Sweden the plan of Norway is further modified in that the state insurance is not compulsory, but a State Insurance Department is provided in which the employer may insure his employees. In Denmark there is no insurance department, but a Workman's Insurance Council is provided to which all accidents must be reported and which fixes the indemnities which the employer or his agent, the insurance company, must pay. In Great Britain the workman must insure, but the employer may meet his obligation of compensation to the employee through state, mutual or private stock companies. If an employer does not insure, the English law makes his employees preferred creditors up to $500. In France there is a law imposing a special tax on employers who are liable to pay compensation, and the proceeds of this tax are used to indemnify the victims of accidents in those cases in which the employer becomes insolvent after the accident occurs.[1] The law secures protection to the worker, but leaves the employers free to choose their own way of meeting their obligations. The law is practically universally followed because employers are released from other liabilities on condition that they pay at least one third of the insurance premiums in an insurance organization which is approved by the government and which guarantees injured members medical relief and an indemnity of at least half wages. Belgium has both voluntary and compulsory accident insurance with a tendency to make all compulsory, as it is already for miners, and all accidents from whatever cause bring indemnity.

The Workman's Compensation Law of Switzerland has compulsory insurance against nonoccupational accidents. Instead of the employer meeting the whole cost, as in the case of industrial accidents, the premiums are borne jointly by the individual insured workman and the state, the latter paying 25 per cent.

The insurance against sickness differs from that against accident in that the workman contributes part of the funds, the employer contributing part and the state a varying amount. In the subsidized voluntary scheme as of Sweden, Denmark, Belgium, France and Switzerland, the government aid is given to various societies, and while the membership of these societies is voluntary on the part of the workman, each workman must have the opportunity to join some society, and the government will aid with its subsidy only those societies which will accept its regulations. The regulations vary in the different countries, and usually the amounts given by the government is in ratio to the membership of each society. In Denmark this voluntary method has been fairly successful, for not only does it give a protection to sickness of its members, but among its benefits it permits the wife of the workman also to be insured, thus giving her confinement insurance, and it also gives the medical care of children under 15, thus giving medical attendance to schoolchildren under that age. But even with these advantages, only about three fifths of the workmen of Denmark are said to hold membership in the sickness insurance societies. In Sweden these societies do not seem to contain more than half this number.

The Swiss law gives greater benefits, and being passed in 1912, has been framed from greater experience to meet better the real necessities than the laws of the other countries. But not all these voluntary systems of insurance are appreciated by the wage earners, or at least taken full advantage of, whether the men cannot make the sacrifice of the necessary investment to obtain the insurance, or at the wage on which they live they are not given enough even to set aside

1. Henderson, C. R.: Industrial Insurance in United States, Univ. of Chicago Press, 1909.

the small sum necessary for this; but whatever may be the reason, experience shows that the voluntary systems are slow in extending among the working classes.

COMPULSORY SICKNESS INSURANCE

Compulsory sick insurance has reached its greatest development in Germany, Great Britain and Russia. In putting into effect the compulsory insurance, the governments of Europe have moved in the line of least resistance to obtain this end. The sick insurance is done through well-recognized societies already existing, and, in fact, they vary from the old medieval guilds to the modern establishment fund where the employees of a single establishment are united in benevolent organization. This is equally true in the other countries in Europe with the voluntary subsidized insurance, and is also true in England, where the societies through which the insurance is obtained are the large, friendly societies which are similar to our fraternal societies. In Germany the employer pays one third and the employee two thirds of the premiums. In England the employer pays 33 per cent. for men and 37.5 per cent. for women; the employee, if a man, pays 44.5 per cent. and 37.5 per cent. if a woman, the state contributing in the case of women 25 per cent. and in the case of men 22.5 per cent. of the entire expense. In Hungary, employer and employees contribute equal amounts. In Russia the workman pays 66⅔ per cent. and the employer 33⅓ per cent., but the entire cost of the medical aid is placed, in Russia, on the employer.

This sickness insurance takes care in a great measure of the minor accidents, because in Germany the accident insurance does not begin in nonfatal cases until thirteen weeks after the accident occurs. In Austria the accident insurance begins after four weeks, and in Hungary after ten weeks. This compulsory sick insurance has the advantage that it covers all wage earners in the country who are earning a certain wage. In many countries, as Germany and England, there is voluntary insurance for those who are earning a little higher wage.

OLD AGE INSURANCE

In both France and Germany the old age systems differ widely in details of the methods employed, but arrive at about the same results in giving a definite pension to old age, Germany at the age of 70, France at the age of 60. Invalidity is included in both these schemes, but the conception of invalidity also differs widely: In France it is total and permanent disablement; in Germany it is when a person's working capacity is reduced to one third of the normal amount, so that under the invalidity heading it includes the heading of premature old age or the individual worn out before even the physiologic old age comes on. In Great Britain the old age pension is given at 70 years of age and according to a sliding scale of rates and conditioned on certain qualifications. Norway, Sweden and Holland do not have old age pensions. Belgium has a voluntary pension system for all citizens. The pensions begin at from 55 to 65 years, but an invalid pension is paid to those incapacitated before the pension year. New Zealand, New South Wales and Victoria have old age pensions at 65 years, following more the plan of England than of Germany.

WIDOWS AND ORPHANS

The insurance or pension for widows and orphans is equivalent to life insurance on the life of the bread winner of the family against his death through sickness or accident at any time. Death through accident, under the workman's compensation, is provided for as is also partial and permanent total disability; but death through accident not connected with his occupation or through sickness is not provided for, except in Switzerland, under the accident compensation laws. Societies not subsidized by the state which have undertaken sickness insurance have always found it difficult, and in the majority of cases absolutely impossible, to undertake also the workman's life insurance or his old age pension, because the members have been unwilling to pay premiums high enough to accumulate sufficient capital to pay pensions and remain solvent. For instance, many young men would form together in a group, forming a society in which they would be willing to give part of their earnings into an insurance fund to protect themselves against accident and ordinary sickness; and in their early years of youth and abundant productivity, and minimum days of sickness, the insurance fund so formed would be able to remain solvent and perform its functions, but as they grew older they could not without increase of premiums and with diminishing revenue carry the extra burden of increased sickness, early invalidity, death payments or the burdens of old age pension (although usually they carried burial insurance), especially as new younger men held aloof from joining the societies because of the higher premiums to be paid.

In considering the old age pensions, the same facts come out strongly as in sickness insurance. That is, the voluntary subsidized old age insurance attracts a very small proportion of workmen, and these are the better paid classes. Even among these, many accounts are started and are allowed to lapse, and usually only that amount is contributed necessary to obtain the minimum subsidy. The pensions thus acquired are small indeed. So far experience seems to show, as in other insurance, that there is an unwillingness or inability of the great mass of the working classes to keep up of their own free will a comprehensive system of voluntary insurance.

Included under the sickness benefits of almost all the countries of Europe is found a maternity benefit. This is usually included simply as a sickness benefit and is paid, in some instances, to the husband for a definite period as if his wife were disabled from sickness. In instances in which the woman herself is a member of the insurance society, she has the benefit in her own right. In England, if she be a married woman or a widow with a posthumous child, she has the ordinary sickness benefit plus the thirty shillings for the maternity benefit; if unmarried, she apparently has only the maternity benefit. The medical maternity benefit does not provide any medical treatment or attendance in respect to a confinement.

MATERNITY INSURANCE

In Italy there has been a compulsory maternity insurance since 1910 and in the absence of any national sick insurance in this country. It covers all working women in factories, etc., of an age from 15 to 50, married and unmarried alike, the employers and the employees contributing an equal amount. This total contribution is 1 lira (19 cents) for women from 15 to 20 years old and 38 cents for the ages from 20 to 25. The amount of benefit is 30 lire, or $5.79, to which the state adds 10 lire ($1.93). This, though small, means the cost of midwife and the bare necessities of existence. As a matter of fact, all countries having compulsory insurance laws include a compulsory maternity benefit in their various sick funds. In Germany, in addition to the medical aid, there is six weeks' regular sick benefit regardless of whether or not the mother is able to return to work. Hungary and Norway also give six weeks; Russia and Austria limit it to four weeks. It is further noticeable that the working woman is given this maternity benefit regardless of marriage. The urgency of the economic need justly controls the distribution of the fund.

BENEFITS OF INSURANCE

The benefits obtained from all these insurance schemes and pensions is not large to any one individual; in fact, it is not meant so to be. It is really an existing minimum which enables them to live without starvation, but cannot be placed in the category of what is understood in this country as a living wage, even when the rates of wages are not compared with the American standards. Henderson remarks of the German system, and it holds equally true for the other countries in Europe, that these systems do not make other forms of protection superfluous since

they simply provide for the necessities of existence. They do not remove the motive for forming trade unions and fraternal societies, nor for investing in extra insurance, nor for savings. All these organizations of thrift flourish in Germany.

From this brief summary of the various laws of social insurance in Europe, it is seen that there exists a tendency in these countries toward a complete group of laws which will protect the working community against industrial accidents, against sickness, will cover the loss of time and expenses of maternity, will grant funeral expenses and pensions for partial disability and for complete invalidity, and pensions to the widow and orphan when the bread winner is killed; gives a pension to early old age brought about by a life of toil and of physiologic old age when in natural course it brings the wage earner to a position of complete inability to work. The most comprehensive scheme is that of England, which has added to these insurances and pensions that of unemployment for a certain length of time, provided that this said unemployment does not come from strikes or lockouts. There does remain in England, still, an option under certain circumstances of suing under the old liability laws, but this is seldom taken advantage of. Germany approaches nearest to this complete insurance scheme of England.

INDUSTRIAL INSURANCE IN THE UNITED STATES

In the United States about twenty-six states have accepted some form of workman's compensation law, and compensation acts were adopted in the following twenty-one states in the order named: New York, Washington, Kansas, Nevada, New Jersey, California, Wisconsin, Ohio, Massachusetts, New Hampshire, Michigan, Maryland, Rhode Island, Arizona, West Virginia, Oregon, Texas, Iowa, Nebraska, Minnesota, Connecticut. In all these compensations the principals are elective, except those of New York and Washington, and the new acts of Ohio and California which went into operation Jan. 1, 1914. New York, California and Ohio amended their constitutions so as to admit the adoption of their compulsory acts. The first compensation act of New York State was rejected by its courts of appeals as unconstitutional, but since the constitutional amendment adopted in the state, a compensation law has been in full operation since July 1, 1914.

It is impossible in a report of this nature to go into the minute details of all the various compensation laws of the different states, nor can the Judicial Council at this time pretend to present a complete list of the states in which the laws have been passed or a complete digest of these laws. In general, however, the following differences are worthy of note and will be of interest:

New York, Washington, California and Ohio have adopted compulsory compensation acts; all the other states have adopted elective acts. The method of making the election varies in different states; in some states the employer is required to signify his acceptance of the law by an affirmative act, such as filing a written statement to that effect, with the specified board or official and by notifying his employees. In certain states the employer is presumed to have accepted the act unless he files a statement to the contrary. At first the latter method seemed to bring the greatest number under the working of the act; but it was soon found in states in which the employer elected or refused to accept the law by voluntary act on his part that in these states there was a more widespread interest and a corresponding stricter observance of the spirit of the law. Under the elective compensation act an employer may accept the act or operate under the old liability laws, but with the defenses of assumption of risk, the fellow servant rule, and contributory negligence abrogated. In Texas the doctrine of comparative negligence has been substituted for the defense of contributory negligence, and the negligence of the injured person is to be considered by the jury only as an element in estimating the reduction of the amount of damages. The federal law also requires the liability of railroad companies to interstate employees, and the doctrine of comparative negligence has been substituted for contributory negligence. Most of the states cover the employment of all wage earners except farm laborers, domestic servants and casual employees. Several states admit all workers in interstate employment on railroads. Several states include all employment except casual employees. The injuries covered include all personal or accidental injuries arising out of the course of employment, unless the injury is due to the serious or wilful misconduct of the employee, or, in other states it is expressed, "except those intentionally self-inflicted."

In the Maryland law there are included, besides the accidental personal injuries, such disease or infection as may naturally and unavoidably result therefrom. The Massachusetts courts in 1914 decided that "personal injury includes any injury or disease which arises out of and in the course of the employment which causes incapacity for work and thereby impairs the ability of the employee for earning wages." This has already included compensation for optic neuritis and lead poisoning and death from an already existing heart lesion. It is thus evident that occupational diseases are included under the Massachusetts law. These decisions will have far-reaching effect.

The injuries due to intoxication are not covered by these laws in California, Connecticut, Iowa, Kansas, Maryland, Minnesota, Nevada, New Hampshire, New Jersey, New York, Rhode Island and West Virginia. Washington and Oregon have no waiting period during which the injured workman must wait before compensation is paid, though during this period in many states he has full medical attendance. There is one week waiting period in Texas, West Virginia, Wisconsin and Ohio, and two weeks in Rhode Island, Nevada, New Hampshire, New Jersey, New York, Kansas, Massachusetts, Michigan, Nebraska, Arizona, California, Connecticut and Iowa. Several of the states which have the waiting period provide that if the disability lasts for more than a certain length of time, compensation is given from the day of the accident; thus if disability lasts for more than four weeks in Wisconsin, this rule goes into effect. In Michigan and Nebraska the same rule prevails after eight weeks. In Illinois, if the injury is permanent, compensation begins on the day after the injury.

In the report of the Commission of the American Federation of Labor and the National Civic Federation, from which these facts are drawn, it is stated that there seems to be an opinion among employers and employees in work which entails as a rule slight accidents that waiting periods are unfair; but among the workers and employers in hazardous employments waiting periods seem to be more a matter of indifference, provided, however, that for serious accidents and disability they are assured of a high ratio of compensation.

The amount of compensation varies in the different states from 40 per cent. to 66⅔ per cent. of the wages of the injured employee. In Washington the compensation averages about 40 per cent. of the wages; in California, 65 per cent.; in Nevada, 60 per cent.; in Ohio, 66⅔ per cent.; in Texas, 60 per cent.; in Wisconsin, 65 per cent.; in New York, 66⅔ per cent., and in all other states here named 50 per cent. There is a tendency in the states to a growing demand apparently that the compensation period for total permanent disability shall cover the lifetime of the victim. The latest Wisconsin statute provides that in the case of the employee who is over 55 years of age, compensation shall be reduced by 5 per cent.; if over 60 years of age, compensation shall be reduced by 10 per cent.; if over 65 years of age, by 15 per cent. The antithesis of this is in New York State where, if the injured employee was a minor when injured, and that under normal conditions his wages would be expected to increase, the fact may be considered in arriving at this average weekly wages. Under this provision, compensation would be increased.

California has apparently worked out the most scientific schedule for the means of determining the percentage of

disability, figuring it out on the nature of the physical injury or disfigurement, the occupation of the injured employee and his age at the time of such injury. Under such a statute a disability that interferes with the injured person carrying on his trade or occupation will be considered as involving a greater percentage of disability than a similar injury inflicted on a person engaged in an occupation not affected by the injury or affected to a less extent.

The method of administering the compensation acts is by some form of industrial accident board in Massachusetts, Connecticut, Ohio, California, Illinois, Michigan, Wisconsin, Iowa, Texas, Nevada, Oregon, West Virginia, New York and Washington. These boards are appointed by the governor of the state, and settlements between employer and employee are subject to the approval of the board to be effective. Some such board as this is a necessity, because otherwise fraud and imposition on the employees are possible, and in the present development of humanity are sure to occur. For instance, in the state of New Jersey there is no state record showing whether or not employees are being fairly treated under the act. By the law, settlements must be reported to the Commissioner of Labor, who places them on file and who has no power to investigate or supervise the settlements, and it seems that only a part of the settlements are reported. The Commissioner of Labor of that state, in a published address, states that the records show that approximately 19 per cent. of the cases reported were paid in a faulty or irregular manner, 7 per cent. did not receive any compensation, 14 per cent. did not receive medical aid. In Minnesota, where there is also no industrial board, the law requires that settlements shall be made according to the provisions of the act and approved by the judge of the district court. In Rhode Island, which also has no industrial accident board, settlements must be approved by a justice of the superior court. There is no provision of law requiring the approval of settlement agreements in Kansas, Nebraska, New Hampshire, New Jersey and Arizona; in fact, the various methods of supervising settlement agreements may be divided into groups as follows: Those states which, while permitting settlement agreements, provide no method whatever of supervising the agreement; those states requiring the filing of such agreement with a public official without giving that official power to approve or disapprove them; those states requiring the approval of such agreements by some official other than an industrial accident board; those states which, though having industrial accident boards, do not require the board or any other official to approve or disapprove the settlement agreements; those states having an industrial accident board and requiring the approval of settlement agreements by such board and the filing of receipts and vouchers with the board, showing the payments had been made pursuant to the settlement agreements; and those states not permitting settlement agreements, but requiring that all cases be submitted to the state board and that the amount of compensation as fixed by the board be collected from the employer or insurance company by the board and in turn paid out by the board to the injured workman or beneficiaries.

There are four methods of insuring the employers to protect the employees against insolvency. As most payments are to be made weekly, instead of a lump sum, it is necessary that, even though an employer should be solvent when an accident occurs, the employee should be protected against possible future insolvency of the employer. The four methods adopted, therefore, are that employers whose solvency is approved by the state board are permitted to carry their own risk, but others must take out the insurance in either a mutual insurance company or a stock company or in the state insurance fund, the latter being administered by the state insurance commissioner and maintained by assessment on the employers electing to contribute to a state fund.

Arizona, Rhode Island, New Jersey, Nebraska, California, Minnesota and Kansas under their compensation acts do not compel insurance on the part of the employer, although California, while it does not make insurance compulsory, provides that the employer may insure in a mutual company or stock company of the state insurance fund. Ohio, Washington, Oregon, Nevada and West Virginia have a state fund differing in detail in the matter of its use. In Massachusetts and Texas the employers must insure in a mutual company formed by law or in any other mutual company or liability company authorized by the laws of the state. Michigan and New York practically accept from the employers all four methods of insurance, except that in New York the commission may require of the employer a deposit of securities to insure his solvency. Connecticut and Iowa have no state fund, but also require security from the employer or permit insurance in a mutual or stock company.

The cost of compensation acts compared with the cost under the liability laws to the same employers either in form of insurance payment or payments direct to the employees, given by 526 employers in ten different states is, that under the compensation act a total of $1,215,690.50 has been paid as compared with a similar period under the liability laws of $730,857.24. At first, in the early years of the compensation laws, the cost is greater than under the old liability laws, and there is no question but that the injured workers receive more, and they receive it in more just and even amounts, than under the old liability law. In 1913 the Massachusetts Industrial Accident Board published a comparison between the amounts paid beneficiaries of employees who were not under the compensation acts and the amounts such beneficiaries would have received had the employees been under the compensation act. The board found that such beneficiaries received only $60,322.40, an average amount in each case of $701.42, whereas had the employees been under the compensation act the beneficiaries would have received $164,488.00, an average of $1,900.57 in each case. The compensation laws finally bring about a reduction in the number of accidents through an increase of preventive methods and a lessening in the number of severe accidents.

Table 1 gives an excellent description of how the compensation law compensates and is taken from the 1914 report of the Workmen's Compensation Commission of Missouri.

TABLE 1.—WORKING OF COMPENSATION LAW

Approximate loss of 50,000 injuries per year..		
Borne by employer:		
Approximate medical aid in all cases.....	$258,500.00	$2,800,000.00
Two thirds of the approximate wage loss for disabilities lasting over two weeks.....	916,006.67	
Approximately 200 deaths at an average of $4,000 each	800,000.00	
Total borne by employer.....		$1,974,506.67
Difference borne by employee.....		$ 825,493.33
Estimated as follows:		
Approximate wage loss of two weeks waiting period	$367,490.00	
One third of approximate wage loss for disabilities lasting over two weeks.....	458,003.33	
	$825,493.33	

A member of the Massachusetts Industrial Accident Board is quoted as saying: "By the reduction in the number of accidents and a lessening of their severity, hundreds of thousands of dollars in insurance premiums, now paid because of present conditions, will be saved; just as fire insurance premiums are most materially reduced for those who take steps to safeguard against fire. Nearly one half of the money now spent for workmen's compensation insurance can be saved to the employers, while the wage earners will save the loss of the half wages they now lose when under compensation, for they will not be injured and will therefore keep at work continuously instead of suffering pain personally and their families privation, if not actual want. Through this saving, other and material benefits will accrue to the employees. The present source of social waste runs into enormous figures. It is estimated by those who have made a study of industrial accidents that 50 per cent. or more of such accidents are preventable; 25 per cent., judging from experience in those great workshops

where this matter has been given most serious attention, can be prevented by the adoption of safety devices, and from 25 to 40 per cent. can be eliminated by educational work, instilling the safety idea into the minds of the workers and, in fact, of all the people in this commonwealth."

DIGEST OF PROVISIONS IN STATE LAWS

The following is a digest in detail of the various medical and surgical provisions of the state laws:

ARIZONA: No medical and surgical aid, except that personal representative is authorized in case of death to pay out of the compensation fund for reasonable medical attendance and burial of the decedent.

CALIFORNIA: Employer must furnish reasonable medical, surgical and hospital treatment for a period not exceeding ninety days. If the employer neglects or refuses reasonably so to do, he will be liable for the reasonable expenses incurred by the employee in providing the same.

CONNECTICUT: Employer must furnish reasonable medical and surgical aid during the thirty days immediately following the injury, but the injured employee may, at his option, refuse such aid and provide the same at his own expense; or if the employer fails to provide such aid promptly, the injured employee may do so at the expense of the employer. If injured employee refuses to accept or fails to provide such medical and surgical aid, all rights of compensation are suspended during such refusal and failure.

ILLINOIS: The employer shall provide necessary first aid, medical, surgical and hospital services for a period not longer than eight weeks, not to exceed, however, more than $200. The employee may elect to secure his own physician, surgical or hospital services at his own expense.

IOWA: At any time during the first two weeks of incapacity an employer that is requested by the workman or any one for him, or if so ordered by the Iowa industrial commission, shall furnish reasonable surgical, medical and hospital services, the amount not to exceed $100.

KANSAS: No medical and surgical aid, except that in case of death without dependents, the employer must pay reasonable expense for medical attendance and burial services, not to exceed in value $100.

MARYLAND: Such medical, surgical or other attendance or treatment, nurse and hospital services, medicines, crutches and apparatus as may be required by the commission in an amount not to exceed the sum of $150. If the employer fail to provide the same, the injured employee may do so at the expense of the employer. . . . In case death ensues from the injury within two years, reasonable funeral expenses shall be allowed not to exceed the sum of $75.

MASSACHUSETTS: Reasonable medical and hospital services, and medicines, when needed, during the first two weeks after injury.

MICHIGAN: During three weeks after injury, employer shall furnish or cause to be furnished reasonable medical and hospital services and medicines.

MINNESOTA: Employer must furnish such medical and surgical treatment and supplies, as may reasonably be required during a maximum period of ninety days. If employer is unable or refuses to furnish such services, he will be liable up to a maximum of $100. If necessary, court may require employer to furnish additional service after the ninety days' period, with a total maximum of $200.

MISSOURI: Practically makes the liability of the employer for medical aid unlimited, and in case he fails to furnish or tender the same, the employee or some one for him may make the employer liable therefor; allows medical aid in all cases and in addition to all other compensation; allows the employer in the first instance to select the physician; requires the employer to pay for hospital service rendered by a public institution; limits all charges for medical aid to such as are reasonable.

NEBRASKA: Employer must furnish reasonable medical aid during the first twenty-one days after disability, but not to exceed the amount of $200. Employer relieved from paying compensation for any aggravation of injury due to employee's refusal to accept medical aid.

NEVADA: No medical and surgical aid.

NEW HAMPSHIRE: No medical and surgical aid except that, in case of death without dependents, employer must pay for medical services and expenses of burial, the amount not to exceed $100.

NEW JERSEY: During the first two weeks after the injury, the employer shall furnish reasonable medical and hospital services and medicines, as and when needed, not to exceed $50 in value, unless the employee refuses to allow them to be furnished by the employer.

NEW YORK: The employer shall promptly provide for the injured employee such medical, surgical or other attendance, or nurse, hospital services, medicines, crutches and apparatus as may be required, or be requested by the employee within sixty days after the injury. If the employer fails to provide the same, the injured employee may do so at the expense of the employer. All fees and other charges for such treatments and services shall be subject to regulation by the commission.

OHIO: The state liability board of awards shall disburse and pay from the state insurance fund such amounts for medical, nurse and hospital services and medicines as it may deem proper, not to exceed the sum of $200. The board shall have full power to adopt rules and regulations with respect to furnishing medical, nurse and hospital services and medicines to injured employees entitled thereto.

OREGON: The commission shall have authority to provide, under uniform rules and regulations, first aid to workmen who are entitled to benefits hereunder, together with medical and surgical attendance and hospital accommodations, the amount not to exceed $250 in any one case.

RHODE ISLAND: During the first two weeks of injury, employer shall furnish reasonable medical and hospital services and medicines when they are needed; amount of the charges for such services to be fixed, in case of failure to agree, by the superior court.

TEXAS: During the first week of injury, the association shall furnish reasonable medical and surgical aid when needed, and if it does not furnish these immediately as and when needed, it shall repay all sums reasonably paid or incurred for same, provided that reasonable notice of injury be given to the association.

WASHINGTON: No medical aid.

WEST VIRGINIA: The commission shall pay for such medical and hospital services as it may deem proper, with a maximum of $150, except where injured employee is entitled to the same through some contract connected with his employment or otherwise.

WISCONSIN: Employer must furnish such medical aid, including crutches and apparatus, as required at time of injury and thereafter during a period of not to exceed ninety days; in case of employer's neglect or refusal, he shall be liable for reasonable expense therefor incurred by employee.

Table 2, from the second annual report of the Industrial Commission of Wisconsin, brings together in a comparative way the value of various compensations in the different states and the maximum amount of medical attendance.

RELATION OF ACCIDENTS TO THE INDUSTRIES

Before discussing the relation of the medical profession in Europe and the United States to these social laws, it is important that we should grasp in some measure the relation of industrial accidents to the industries, that we may appreciate what is the human wastage in industrial work. In the September, 1908, number of the *Bulletin of the Bureau of Labor* of the United States, Frederick L. Hoffman published some statistics on industrial accidents. Taking the total population of the United States at the present day as one hundred millions and figuring by the ratios given by Hoffman, there are about thirty millions occupied males of 15 years of age or over. Using still further the ratios of Hoffman, it is fair to conclude that there are somewhere between 35,000 and 40,000 fatal accidents a year, and Hoffman believes it is a safe estimate that half of the accidents are the immediate result of dangerous industries or trades. This is considered a very conservative estimate. Rubinow gives the statistics of eleven European countries with two million industrial accidents, and of these 22,000 were fatal.

In considering all statistics between different countries, one must always realize that comparisons cannot be too minutely followed, as, for instance, in the European countries the industries vary widely, the ratio of accidents in

different industries differ widely, and the statistics of Germany, in which country the greatest number of accidents in the foregoing statistics occurred, agricultural laborers are included and are not included in any other country. Moreover, the industrial accidents of the United States are calculated on the ratio of the registration area, which omits wide areas in the West where the industries with a high rate of accidents, as mining and lumbering, predominate. Industries presenting the greatest percentage of accidental danger are well known. Mining, metallurgy, metal work, building and construction, and transportation in France claimed about two thirds of all industrial accidents. These are exactly the industries which are especially developed in the United States. In France these industrial activities claimed about one and one-half millions out of a total of ten million wage earners, and in the United States these industries claimed about one fourth of the total male wage earners, or about seven and one-half millions.

In Minnesota a careful investigation ending July 31, 1910, recorded 10,463 accidents and 342 fatal ones, or 30 accidents to each fatality; in Massachusetts, from July 1, 1912, to June 30, 1913, there were 90,168 accidents, 474 of which were fatal, or one to every 190; in Wisconsin, out of 7,186 accidents reported in 1906, there were 401 fatal accidents, or 36 accidents for each fatality. It is evident that no accurate statement can be made, but there is no doubt from these figures that a very conservative estimate would be of about 20,000 fatal industrial accidents a year out of certainly two million accidents.

It is interesting to note that there are certain laws seeming to govern the causation of these accidents, that the increase in their number occurs in ratio to the fatigue of the worker, and most accidents occur between 10 and 11 in the morning and between 3 and 4 in the afternoon, there being a very marked fall at the noontide hour from 12 to 1. Of course, this fall is influenced by the diminished number working, but there is no question of the increased ratio of accidents occurring as fatigue increases. This is also shown and confirmed by the fact that women, who are physically weaker and have less endurance than men, show a higher rate of increase both toward the noon hour and the end of the day. There is also a marked increase of industrial accidents toward the end of the week, and this again is more pronounced among women than among men.

It is interesting to note, also, where statistics place the responsibility for accidents. The German statistics give Table 3.

TABLE 3.—RESPONSIBILITY FOR ACCIDENTS IN GERMANY

Cause	Percentage of all accidents due to cause specified 1887	1897	1907
Fault of employer	20.47	17.30	12.06
Fault of injured employee	26.56	29.74	41.26
Fault of both employer and employee	4.61	4.83	0.91
Fault of fellow employee	3.40	5.31	5.94
General hazard of industry	44.96	41.55	37.65
Other causes (chance, etc.)	.....	1.27	2.18

Continuing these still further, the accidents due to the employers were as given in Table 4.

TABLE 4.—CAUSES OF ACCIDENTS IN GERMANY

Accidents due to	1887 Per cent.	1897 Per cent.	1907 Per cent.
Defective apparatus	7.28	7.15	5.40
Absence of safety appliances	11.03	7.82	4.69
Absence of proper regulations	2.16	1.84	1.97
	20.47	16.81	12.06

Table 5 compares these with the fault of the employee.

TABLE 5.—ACCIDENTS IN GERMANY DUE TO FAULT OF EMPLOYEE

Accidents due to	1887 Per cent.	1897 Per cent.	1907 Per cent.
Lack of skill, inattention, etc.	17.09	20.85	28.96
Failure to use existing protective appliances	1.82	1.92	2.22
Actions contrary to existing regulations	5.35	5.44	9.48
Actions of horseplay, mischief, intoxication	2.05	1.10	0.55
Unsuitable clothing (aprons, neckties, etc.)	.25	.49	.05
	26.56	29.89	41.26

TABLE 2.—VALUE OF VARIOUS COMPENSATIONS IN DIFFERENT STATES

State	Death	Permanent Total Disability	Temporary Total Disability 12 Weeks	Medical Attendance, Maximum	
	Amount	*Amount*	*Amount* †	*No. days*	*Amount*
Wisconsin	$2,194	$3,250	$90	90	...
Arizona	2,400*	3,330	69	..	...
California	1,682	5,045	75	90	...
Connecticut	1,814	2,700	58	30	...
Illinois	2,137	4,745	63	56	...
Iowa	1,691	2,065	58	..	...
Kansas	1,714	2,700	66	14	...
Maryland	1,800*	4,579	63	..	$150
Massachusetts	1,591	2,511	58	14	...
Michigan	1,591	2,511	69	21	...
Minnesota	1,908	2,065	60	90	...
Nebraska	1,978	4,958	72	21	...
Nevada	2,339	2,214	72	..	...
New Hampshire	1,800*	1,644	60	..	...
New Jersey	1,820	2,137	60	14	...
New York	2,400*	2,210	60	..	...
Ohio	2,350	6,099	88	..	250
Oregon	7,672	6,760	74	..	250
Rhode Island	1,591	2,502	58	14	...
Texas	2,343	2,576	79	7	...
Washington	6,191	5,610	86	..	...
West Virginia	5,356	4,013	59	..	150
Average	$2,446	$3,373	$81	..	...

* Lump sum payments.
† Present worths of weekly or monthly payments. Where payments continue till death, present worths are based on expectancy of life. For total permanent disability two thirds of the normal life is assumed.

Comparing some American statistics with these, Table 6 is taken from Miss Eastman's investigation in Pittsburgh, which gives responsibility for 377 industrial accidents resulting in death.

TABLE 6.—CAUSES OF 377 FATAL INDUSTRIAL ACCIDENTS IN PITTSBURGH

Causes Attributed	Number of Accidents	Per cent. of Total
Cause attributed solely to employers or those who represent them in positions of authority	113	29.97
Causes attributed solely to those killed or their fellow workmen	105	27.85
Cause attributed to both the foregoing classes	60	15.91
Cause attributed to neither of the foregoing classes	99	26.27
	377	100.00

These statistics are interesting as showing the uncontrollable human elements of negligence, carelessness and inexperience on the part of employer and employee which, added to the ratio of physical fatigue on the part of the worker, produce a steady ratio of human wastage, the sum total of which in the United States reaches enormous figures.

TABLE 7.—AUSTRIAN STATISTICS

Result of Injury	No.	Per cent.
Loss of left arm	248	.26
Loss of right arm	360	.38
Fracture of arm	527	.55
Fracture of forearm	2,214	2.32
Other injuries to arm	3,539	3.72
All injuries to arm	6,888	7.23
Loss of left hand	186	.20
Loss of right hand	231	.24
Fractures of bone of hand	352	.37
Other injuries of hand	5,286	5.55
All injuries to hand	6,055	6.36
Loss of one finger, right hand	675	.71
Loss of one finger, left hand	593	.62
Loss of two or more fingers, right hand	947	.99
Loss of two or more fingers, left hand	922	.97
Loss of part of one finger, right hand	899	.94
Loss of part of one finger, left hand	859	.90
Stiffness of fingers	742	.78
Other injuries to fingers	25,721	27.00
Total injuries to fingers	31,358	32.91
Total injuries to upper extremity	44,301	46.50
Loss of one leg	537	.56
Loss of both legs	24	.03
Fracture of upper leg	857	.90
Fracture of lower leg	3,772	3.96
Injuries of arch of foot	1,808	1.90
Other injuries of leg or foot	15,170	15.92
All injuries to leg or foot	22,168	23.27
Loss of toes	210	.22
Injuries to toes	3,054	3.20
Total injuries to toes	3,264	3.42
Total injuries to lower extremity	25,432	26.69
Loss or injury to arm and leg	580	.61
Total injuries to upper or lower extremity	70,313	73.80
Loss of one eye	1,718	1.80
Loss of one eye and injury to the other	228	.24
Loss of both eyes	51	.05
Injury to eye	3,191	3.35
Injury to both eyes	224	.24
Total injuries to eyes	5,412	5.68
Injury to head	3,365	3.53
Injury to shoulder	1,514	1.59
Fracture of collar bone	742	.78
Fracture of ribs	1,415	1.49
Injuries to trunk	4,355	4.57
Ruptured	560	.60
Injuries to several parts of body	4,537	4.76
Internal injuries	1,155	1.21
Concussion of brain	502	.53
Miscellaneous	510	.55
Traumatic neurosis	204	.21
Suffocation	219	.23
Drowning	166	.17
Injuries to head and trunk	19,544	20.52
	95,269	100.00

SUMMARY OF SERIOUS ACCIDENTS

Loss of:	No.	Per cent.
Arm	608	.64
Hand	417	.44
Fingers	4,895	5.14
Leg	561	.59
Toes	210	.22
Eyes	1,997	2.10
Total loss of parts	8,688	9.13
Fractures:	**No.**	**Per cent.**
Arm and forearm	2,741	2.87
Hand	352	.37
Leg	4,629	4.86
Collar bone	742	.78
Ribs	1,415	1.49
Total fracture	9,879	10.37

From the medical point of view it is interesting to note what are the results of injuries in the nonfatal group. The statistics of Austria from 1897 to 1901 are the most accurately prepared statistics that are to be found (Table 7).

Looking at it from another point of view, as to the results of injuries, the disability caused and the proportion of accidents causing the disability, is interesting. Thus in 95,269 accidents, there were 3,071 fatal ones; there were 91,398 nonfatal ones and there were 8,688 accidents which produced the total loss of some part of the human body, that is, of arms, or hands, or fingers, or legs, or toes, or eyes. But there were 36,911 which resulted in permanent disability. Table 8 shows this in detail and shows the astonishing result that 34 per cent. of all injuries, without loss of parts, are permanent.

TABLE 8.—PERMANENT DISABILITIES ACCORDING TO AUSTRIAN STATISTICS

Injuries	Total Number of Cases	Cases Resulting in Permanent Disability	Per Cent.
Fracture of arm	527	290	55
Fracture of forearm	2,114	1,094	51
Other injuries of arm	3,539	1,189	34
Fracture of bones of hand	352	152	43
Other injuries of hands	5,286	1,306	24
Stiffness of fingers	742	709	96
Other injuries of fingers	25,721	7,143	28
Fracture of leg	4,629	2,910	63
Injury of arch of foot	1,808	792	44
Other injuries of leg or foot	15,170	3,384	22
Injury to eyes	3,415	2,174	64
Injuries to head	3,365	1,183	35
Injuries to shoulder	1,514	819	54
Fracture of collar bone	742	372	50
Fracture of ribs	1,415	460	33
Injuries to trunk	4,355	1,502	34
Ruptures, etc.	860	599	70
Injuries to several parts	4,537	1,507	33
Internal injuries	1,155	232	20
Concussion of brain	502	186	37
Miscellaneous	527	184	35
Traumatic neurosis	204	173	85
	82,479	28,360	34

These may seem astonishing figures, but from the report of the Industrial Insurance Department of the state of Washington, it is evident that while the fractures amounted to only 10 per cent. of the injuries, they caused 27 per cent. of the total compensation, and 20 per cent. of all fractures still suffered some permanent partial disability. It has been further proved by statistics in this country that after the age of 35 the wage earner who suffers from a fractured femur does not go back to the full vigor of his previous working ability.* We shall see that these statistics are useful in comparing and in judging of the fee schedules of insurance companies which are offered to medical men in this country to sign.

AMPUTATIONS AND FRACTURES

In all these fee schedules the amputation is made the main operation, compared to the fracture, and is paid a higher rate of compensation to the medical man, when in reality, while it produces an evident loss of part and an evident disability which is permanent, the fracture requires greater skill, greater care and greater responsibility in

* Walker, J. B.: Femur Fractures, Amer. Jour. Surg., December, 1914.

TABLE 9.—DISTRIBUTION OF ACCIDENTS; KIND AND DEGREE OF DISABILITY

Country and Year	Total Number of Accidents	Fatal Accidents		Permanent Disability				Temporary Disability	
				Total		Partial			
		Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.
Austria, 1906*	26,639	885	3.32	403	1.51	9,703	36.76	15,558	58.41
Belgium, 1908	156,499	510	.33	†	†	2,593	1.61	153,406	98.06
France, 1906	404,318	1,967	.49	†	†	5,619	1.39	391,319	98.12
Germany, 1908*	142,965	9,856	6.26	1,160	.81	57,410	40.11	74,589	52.77
Italy, 1906	57,617	430	.70	32	.06	2,716	4.71	54,439	94.53
Russia, 1906	130,049	966	.73	114	.08	16,525	12.14	115,403	87.05
Spain, 1907	30,472	207	.68	19	.06	80	.27	30,164	98.25
Sweden, 1906	15,041	249	1.66	†	†	1,598	8.16	13,444	89.38

* Accidents compensated only. † Not separately stated: included with partial disability.

caring for it, and should be considered the injury possessing the greater responsibility and the greater chance of returning injured workmen to a greater degree of usefulness. Table 9 shows the distribution of accidents occurring and the kind and degree of disability.

DURATION OF DISABILITY

The statistics in Table 10 show the duration of injuries resulting in temporary disability in Italy.

TABLE 10.—DURATION OF INJURIES RESULTING IN TEMPORARY DISABILITY IN ITALY

Accidents and Disability	Number	Per Cent.
Total number of accidents	57,617	100.00
Accidents resulting in death	430	.75
Permanent disability	2,748	4.78
Temporary disability	54,439	94.43
Lasting 6 to 10 days	14,588	25.32
Lasting 11 to 15 days	13,078	22.70
Lasting 16 to 20 days	8,442	14.65
Lasting 21 to 30 days	8,707	15.11
Lasting 31 to 60 days	7,356	12.77
Over 60 days	2,268	3.93

It is noticeable that 48 per cent. of injuries do not last over fifteen days, after all injuries lasting less than five days have been omitted; another 30 per cent. do not extend beyond thirty days, and the remaining 20 per cent. present the serious economic problems.

Table 11, from Russia, is equally interesting. Again, 48 per cent. do not last over fifteen days and 18 per cent. more over twenty-eight days.

TABLE 11.—RUSSIAN STATISTICS

Accidents and Disability	Number	Per Cent.
Total number of accidents in industry	57,196	100.00
Accidents resulting in:		
Death	367	.64
Permanent disability	10,098	17.66
Temporary disability	46,731	82.70
Lasting 7 days and under	13,481	23.57
Lasting 8 to 14 days	14,127	24.70
Lasting 15 to 21 days	6,922	12.10
Lasting 21 to 28 days	3,919	6.85
Lasting 29 to 63 days	6,942	11.35
Lasting 64 to 91 days	1,060	1.85
Lasting over 91 days	730	1.28

In 90,168 accidents recorded for Massachusetts from July 1, 1912 to June 30, 1913, 474 were fatal. "Of the total number, 68,586, or 76 per cent., were for injuries which incapacitated the employee for two weeks or less, and of these, 36,901, or 41 per cent. of the total accidents reported, were for injuries which incapacitated the employee for one day only.

"There were 10,568, or 12 per cent., for injuries which incapacitated the employee from two to four weeks.

"There were 6,638, or 7 per cent., for injuries which incapacitated the employee from four to eight weeks.

"There were 2,355, or 3 per cent., for injuries which incapacitated the employee from eight to thirteen weeks.

"There were 1,275, or 1 per cent., for injuries which incapacitated the employee from thirteen weeks to six months.

"There were 272, or 0.3 per cent., for injuries which incapacitated the employee for over six months."

Rubinow sums up the accidents in the United States that on an estimate of two million accidents in a year, even if only 20 per cent. of the accidents are more or less serious, this would mean 400,000 serious cases. On the basis of that estimate, we may assume, until all statistics make such assumption unnecessary, that there occur in the United States annually about 30,000 fatal industrial accidents, about 200,000 accidents leading to permanent disability, of which nearly 60,000 are cases of actual loss of part of body, and about 100,000 resulting in disability of under 25 per cent. and another 50,000 in disability of from 25 to 50 per cent., and the remainder causing disability of over 50 per cent. In addition, about 170,000 accidents are serious in that the disability lasts over three months and eventually they result in complete recovery, especially if economic conditions favor it.

RISK OF ACCIDENT AND SICKNESS

Industrial accidents as an economic risk to the workman mean that from 5 to 6 per cent. of those engaged will suffer each year from some form of accident, slight or severe. On the other hand, sickness affects annually from 40 to 50 per cent. of the wage earners. These figures are certainly very striking. In only a few countries are we able to gather accurate ideas of the general morbidity of disease among the working classes and to ascertain from these statistics the occurrence of the disease at the different ages of life, the average liability of disease in each trade and the average length of illness with each person afflicted.

TABLE 12.—INFLUENCE OF AGE AND SEX

Age	Cases of Sickness Per 100 Persons Per Annum		Days of Disability (Per Person) Per Annum	
	Male	Female	Male	Female
15	42.9	42.2	5.5	6.4
20	43.8	38.0	6.1	6.4
25	44.0	38.0	6.3	6.9
30	45.6	41.1	6.8	7.9
35	47.4	44.3	7.6	9.0
40	49.2	46.3	8.4	9.7
45	52.9	49.5	9.6	10.7
50	56.2	50.7	11.0	11.5
55	58.0	51.6	12.3	12.0
60	63.6	52.6	15.1	13.9
65	67.7	56.3	19.4	16.3
70	70.8	61.6	23.9	21.5
75	77.7	65.3	31.8	24.5
80	75.3	67.6	37.7	44.7
All ages	47.4	41.9	7.8	7.9

TABLE 13.—INFLUENCE OF SEX AND OCCUPATION

Industries	Cases of Sickness per 100 Persons per Annum	Sick Days per 1 Person per Annum
Males		
Stone working	58.2	17.5
Cement and lime	65.8	13.6
Building trades	51.7	11.7
Metal working	49.6	11.1
Printing, publishing, etc.	32.4	11.1
Glass, porcelain and pottery	44.5	10.8
Paper	39.4	10.9
Chemical industry	49.4	10.7
Leather and similar products	37.7	10.7
Agriculture and forestry	46.9	10.2
Transportation	44.8	9.8
Food and drink	43.4	9.6
Wood and cut materials	38.8	9.2
Fats, oils, varnishes, etc.	41.5	9.1
Gas works	59.9	9.0
Textiles	40.5	8.9
Hotels and restaurants	32.5	8.8
Clothing and cleaning	32.2	8.6
Musical and scientific instruments	31.7	8.1
Hides, leather, etc.	36.0	7.7
Engineers and firemen	35.3	7.4
Office employees	21.6	5.8
Females		
Textiles	69.9	19.3
Paper	55.2	16.3
Printing and publishing	50.4	15.8
Agriculture and forestry	60.8	14.2
Clothing and cleaning	41.0	12.4
Hotels and restaurants	40.9	12.2
Office employees	21.4	7.0

Again, the statistics in Austria and Germany are the most accurate. In Austria, for instance, there were 3,044,129 persons included in the sick funds in 1907, and in the same year 53.3 per cent. of these became ill, showing seventeen days for each case of sickness. In Germany there were, in 1908, 5,206,148 cases of sickness among 12,324,094 persons insured, giving 103,894,299 days of illness and averaging twenty days per case of sickness. Tables 12 and 13 show clearly the influence of age and sex in the incidence of sickness in these sick funds, the first taken from the Austrian statistics and the second from the German statistics of Leipzig.

It is noticeable from Table 12 that fewer women are sick, but each woman averages longer, than the men at the same age, until the age of 50 years is reached; then after this age more men are sick and men average a longer time for each illness.

It is evident, therefore, that in considering any statistics regarding illness, one must consider the variation according to sex, age and occupation. But taking these factors into

account, it is evident that certain trades may be rightfully charged with an increased amount of sickness, outside of its accidents, among its wage earners.

In the "Memorial of Industrial Diseases" it is estimated that the total loss to the American working classes due to illness amounts to $366,000,000 of lost wages annually and $285,000,000 for medical aid, etc., making a total of $651,000,000 for the 33,500,000 wage earners. Against such an economic loss it is small wonder that under those governments in which universal compulsory system of insurance is possible, sickness should be treated as a national calamity to be guarded against by the economic expedient of insurance giving a relatively large return for the smallest outlay from that individual, thus protecting the workman against a genuine calamity. Unquestionably, serious illness among the working classes in this country is a real calamity, as it is the most frequent cause by which their poverty is changed into destitution.

MALINGERING

No state or national insurance against accident or sickness can be conceived in which the human element of malingering will not appear. Under the old common law of accidents, the amount of deliberate fraud to obtain large verdicts from the jury by simulating severe injuries is common knowledge. Under the compensation laws this is bound to increase unless a very firm stand is taken on the part of the authorities with the hearty cooperation of the medical men. If the dishonesty of the malingerer is assisted by the dishonest attestation of the medical attendant, this evil practice is bound to grow to the extent of becoming a widespread state or national scandal. Malingering has increased under the compensation acts of England and is being steadily fought in that country. According to Dr. Ferdinand Friedensburg, the retired president of the Imperial Insurance Office of Germany, the amount of malingering and the extent to which the German workman has been debauched by the lax application of the insurance laws have become an increasingly disgraceful spectacle. Malingering must be differentiated clearly from hysteria, for the first is the deliberate fraud of simulating disease for the sake of obtaining greater compensation by cheating, and the latter is but the expression of the loss of the normal mental or nervous equilibrium produced by intense mental or physical strain, which may, in itself, be sufficient cause for full compensation.

Malingering is a grave problem, for each successful case stimulates further increase of the evil. The mainstay against its growth is a fearless and honest antagonism of the medical profession, and if members of the medical profession should weakly yield to the temptation of furthering this evil practice, they would deserve more severe condemnation than the malingerer himself. The methods employed to prevent malingering have been, in many societies, to employ members of the societies themselves as inspectors who visit at unexpected, irregular times all patients sick or injured and report regularly to the inspecting department of that section. Another method is the transferrence for hospital observation of men suspected of malingering. But whatever methods are taken to circumvent this evil, the final responsibility for its detection and eradication must rest largely with the medical profession and this responsibility must be realized by the profession at large.

PROVISIONS FOR MEDICAL AID

In most countries in Europe, provision for medical aid seems to be fairly generous. In Germany, the minimum requirements are that the fund furnish medical and surgical attendance, free medicine for twenty-six weeks, and such therapeutic supplies as eye-glasses, trusses, bandages, etc. Whenever it is deemed necessary, in severe cases, the fund is to substitute hospital treatment for the home treatment. Many funds have extended their benefits far beyond what the law requires, it being realized that the best of medical aid and medical attention brings a tremendously increased return in rapidity of recovery and economy in compensation and further medical aid. One Bavarian Industries Employers' Association established to its own satisfaction that the expenditure of approximately $8,000 in prompt and expert medical attention to its injured workmen saved approximately $160,000 in compensation expenses.

Most of the countries in Europe, including Great Britain, are equally generous to the workmen in their provision for medical and surgical aid. Russia, however, differs materially from the other countries. Medical aid to the workmen had been in vogue in that country many years before workman's compensation; in fact, it had been established in 1866 for manufacturers and in 1886 for mining, and had always been considered there as a direct responsibility of the employer. The most recent laws in Russia on workman's compensation have not disturbed this old relationship. Hospitals, dispensaries and emergency wards, and even maternity wards and contagious disease wards, are supported entirely at the expense of the employer or by private agreements made between him and private or public hospitals. Moreover, the Zemstvos, the local self-governing boards in the rural districts of Russia, have established a socialized scheme of medicine which seems to be highly perfected and working in an equally satisfactory manner.

STRUGGLE OF THE EUROPEAN PROFESSION

In Europe, the struggle of physicians to obtain their economic rights in dealing with the various societies through which the practical application of the insurance laws took place has been evident from the beginning. In Germany the civil medical practitioners are officially grouped into local associations. These associations perform certain legal functions and exercise certain discipline through medical councils. The German physicians first tried, through these official organizations, to regulate their connections with the insurance societies. The government, however, forbade this as being outside the province of the councils. In Austria and France the government also forbade, for similar reasons, similar action in their official medical councils. In Germany, therefore, physicians organized themselves outside of the official councils, and a society, the *Aerztevereinsbund*, the physicians' confederation, corresponding roughly with the British Medical Association, was formed in 1873. In 1900 another society, commonly known as the *Leipziger Verband*, the Leipzig League, was formed for the special purpose of protection against the sickness insurance societies. In 1903 these two societies amalgamated and formed an aggressive organization to protect their interests. The value of medical organization is well shown in the struggle of the German physicians in these economic questions. Without these organizations the physicians would, as individuals, be entirely helpless against the strongly entrenched lay boards of the sickness societies. Table 14 is of interest as showing in figures these efforts and their results.

TABLE 14.—CONFLICTS BETWEEN PHYSICIANS AND SICKNESS SOCIETIES

Total number of conflicts	1,022
Decided in favor of the doctors	921
In favor of sickness societies (for the time being)	11
Still pending, May 1, 1911	90

When the struggle has reached a deadlock, the physicians have refused to treat members of the insurance societies as such and insisted on treating each individual patient as a private patient. This has caused the societies to import other physicians into the field in various cities; but this expedient has not always been successful because the type of physician brought in has not been so good as the local physician who had formerly done work for the societies, and frequently the societies have been unable to obtain sufficient physicians to do the work. Members of the society, therefore, complained to the authorities that the insurance societies were not giving adequate service; hence there has been interference by the authorities in the quarrel and they have frequently forced the societies to make peace with physicians and give the workmen the adequate service which the law provides.

FREE CHOICE OF PHYSICIAN

In general, the most intense struggle has occurred over the question of free choice of physician by the patient. This was granted in Leipzig and in some other cities; but in Dresden, where the societies seem to have the upper hand, the physicians are in direct contract to the insurance societies. It is claimed that the absolute free choice of physicians brings the amount of medical remuneration up to such proportion of the whole funds of the society that it becomes unbearable. In some localities the remuneration is a compromise between contract and absolute free choice, that is, it is done on the so-called capitation principle, the insurance societies paying a lump sum to some organized medical body for service of its members. The physicians, on the other hand, charge so much per service per patient and hand in their accounts to the medical society. Each physician is paid the percentage of the work due him which the funds allow, that is, if, for instance, $60,000 is paid to the medical society and the total sum of the work of all the physicians amounts to $100,000, each physician is paid six tenths of what he would receive if paid in full.

DEVELOPMENTS IN GERMANY

In 1903, when the new insurance law was passed in Germany, physicians endeavored to obtain in the law many of the rights for which they had struggled. They were but partially successful. Finally, ten years later, there was a general meeting of the profession in Berlin. The meeting was called by the president of the National Federation of Medical Societies, representing a membership of 21,207. It was agreed at this meeting that after Jan. 1, 1914, the insured population of Germany, except in Dresden, Hamburg and Berlin, should not receive any treatment from physicians through the insurance societies, unless these societies acceded to the demands of the physicians or unless the government saw fit to intervene. It was definitely stated that there was no intention on the part of the physicians to refuse medical services to the members of insurance societies as individual patients; the refusal was to treat them as members of the societies. The differences between the physicians and the societies had to do with the right of physicians to representation on the ministering boards of the insurance societies, the right of patients to choose physicians whom they prefer, the method of organization and administration of the medical boards, and other relations and contracts between physicians and insurance societies. The compensation asked for was a per capita fee of five marks per patient per year. This was not to include night visits, attendance on confinements or abortions, treatment of persons who have only a legal but no medical claim on sick benefits, or the treatment of families of insured persons. For all of these services, special arrangements were to be made.

The Federation of Insurance Societies in Germany refused to accede to the demands of the physicians, and refused to recognize the right of physicians to organize the profession for the protection of their individual rights. The organization of the physicians was so effective that only 150 physicians out of the 32,000 in the empire could be induced to accept positions under the insurance societies against the advice of the Leipzig League. Although in some instances the local governments endeavored to force the medical profession to accept the terms offered, it was without effect. Finally, at the last moment, the medical faculties of the German universities offered their services to bring about an understanding, and the so-called Berlin agreement was accepted. This provides for the formation of contract committees composed of representatives of the medical profession and of the insurance societies, free choice of physicians within the lists of the insurance societies, and arbitration courts composed of representatives of the physicians and insurance societies, leaving the remuneration as a local issue. The contracts under this agreement are to run for ten years.

ENGLAND'S PROBLEM

In England, previous to the passage of the national insurance act in 1912, private practice, lodge practice, contract practice and free dispensaries were all in existence. As insurance societies increased in number and power, they forced the physicians to treat large numbers of insured persons at absurdly small rates and refused to recognize the professional organizations in discussion of the conditions. The medical profession in England opposed bitterly the insurance act, and sacrified nearly one-half million dollars in so doing. They demanded as a minimum that the income limit of those insured should be $10 a week, that there should be free choice of doctor by patient, subject to consent of doctor to act administration of the medical and maternity benefits by local health committees and not by the friendly societies, adequate remuneration of the medical practitioners to be paid in the manner preferred by the majority of the medical profession in each district, and adequate representation of the medical profession on the administration bodies, central and local, set up for the working of the insurance scheme. The physicians did not obtain the limitation according to income which they sought. They did obtain freedom from control by the friendly societies, and they obtained, also, freedom of choice of the physician by the patient, this subject to the consent of the physician to act.

After about eighteen months, the effect of the insurance act in England has been that there were then on the panels or lists of physicians working under the act 20,000 of the 22,500 physicians in general practice in Great Britain. The government had distributed among them $20,500,000, an average of $1,150 for each physician. It is claimed that the insurance act has raised the level of the remuneration of the profession, that the average income of physicians has been increased by from $750 to $2,000 a year. It seems to be the general opinion that individual physicians may have suffered and received less remuneration under this act than they formerly received under some special form of contract work; but the general amount of moneys paid to the profession working among the industrial classes has greatly increased, and the average income of the physicians have evidently much increased. Conversely, this insurance act has been a good thing for the community, because previously there had been millions of people who had no medical attendance at all.

The act has shown one marked peculiarity in that it has entirely done away with the practicing pharmacist so called, the drug clerk who prescribes for customers, for the workmen can obtain a physician and drugs now for their insurance, which is cheaper than it is to go and buy drugs from the pharmacist on his recommendation. It is asserted, however, that in some large industrial communities, now that patients obtain their medical attendance under this law, there is vastly more running to the doctor for minor complaints than formerly, and many physicians on the lists are so overworked by the undue number of patients that they cannot give proper attention to those who deserve it. On the figures here given, it would seem that 4 s. 1 d., or $1.02, is the average for each visit, and that the average medical cost to the insurance fund per patient per year has been 7s. 6d., or $1.87.

THE PLAN IN DENMARK

In Denmark the sickness societies often, as in Copenhagen, employ district medical officers, the insured having no choice of doctor unless there be a supplementary physician employed to assist in the work. The number of patients which each district medical officer may have under his care varies greatly, and in some instances it would seems as if the evil of too many patients for such a physician occurred under these circumstances.

There is one marked difference in Denmark insurance laws from those of Germany. In Germany, drugs are given as part of the medical and surgical benefit; in Denmark the societies pay only part of the cost of the ordinary medical and surgical requirements. Experience has shown, according to Gibbon, that when a member himself has to pay a part of the cost of requirements, the total expenditures on him, including that met by the member himself, is much less than when the society pays the whole cost. When the member has to pay part of the cost out of his own pocket,

he is not likely to obtain medicine unless he needs it, and when he gets it he will be careful to be economical in the use of it. A further advantage of requiring a member himself to pay some part of the cost of medical and surgical requirements is that this practice is a useful check on the unnecessary resort to the doctor. A member may have to pay out of his own pocket for part of the results of the visit and for part of the cost of the transaction, and he is therefore encouraged to think before he makes a call on the doctor's services. The Danes are stated not to be addicted to the use of "patent medicines," and in this they seem to be in advance of the Germans. The prevailing insurance scheme is thought to have played a part in promoting this healthy skepticism against quack medicines. In Germany, on the contrary, the expense for drugs has nearly doubled since 1888. In fact, there is no evidence that the insurance scheme of Germany has had any effect in reducing the credulity of human nature on the efficacy of drugs. It is said that in ordinary practice in Germany the sensible and educated patient is contented with a remedy that can be supplied in the household or with a temporary special diet, but the society patient wants more—above all he wants a prescription. He pays his contribution and will not rest satisfied if a doctor contents himself with simple remedies which do not have to be obtained from the pharmacies.

THE EFFECT IN THE UNITED STATES

The economic effect of these laws in the United States on the profession in general has been that the total income of the average surgeon doing work in industrial centers has been raised. Other surgeons who have had unusually good contract positions with certain large firms have suffered greatly in the reduction of their income, because in many instances they have previously received fees which under the compensation laws no commission or insurance company will pay per day or office visit for services to most workmen. Some laws contain the clause that charges for medical and surgical services shall be reasonable, others that they shall be limited to such charges as prevail in the same community for injured persons of a like standard of living. The term "reasonable fee" for such services would also be included under this last definition.

Let us consider first what is the standard of living of the industrial classes. What, therefore, are wages in the United States and how do they differ in one section from another? Is it possible to formulate any statement concerning the variation of wages in the different states of the Union? Scott Nearing[2] has endeavored to answer these questions and concludes as follows:

"The assertion that wages vary widely from section to section of the United States is commonly accepted and is frequently made an axiom of wage theories. In pursuance of this theory, wages in the South are much lower and wages in the West much higher than wages in any other part of the United States, yet a careful analysis of wage statistics shows that neither of these assumptions is wholly correct because there is no great wage variation from one section of the United States to another. Wages are not markedly lower in the South than in the North, though in the Far West they appear to be somewhat higher than in the eastern parts of the country."

After going over a mass of statistics he further states:

"There is no considerable wage variation per hour or per day between the different sections of the United States." This statement he thinks should be modified by accepting a slightly higher wage in most trades in the Western States. "Considering the wages in various cities, the mass of statistics brought together show that the material in this section justifies the conclusion that while a slight variation may occur from city to city, it is not reducible to any formulated rule but appears to depend upon the individual establishments rather than upon the size or location of the cities or towns. That there is a variation in wages from rural to urban centers of population is undoubtedly true, but this variation is probably due to the varying character of rural and urban industries as it does not appear in all the industries studied."

His final conclusion is as follows:

"Here, then, in brief, is an answer to that vital question, 'What are wages?' for the available sources of statistics, and by inference for neighboring localities, the annual earnings (unemployment of 20 per cent. deducted) of adult males and females employed east of the Rockies and north of the Mason and Dixon Line, are distributed over the wage scale thus:

Annual Earnings	Adult Males	Adult Females
Under $200	.....	1 to 5
Under 325	1 to 10	3 to 5
Under 500	1 to 2	9 to 10
Under 600	3 to 4	19 to 20
Under 800	9 to 10	.....

"Three quarters of the adult males and nineteen twentieths of the adult females actually earn less than $600 a year.

"It is evident that a study of classified wage statistics shows that half of the adult males working in the industrial sections of the United States receive less than 600 per year; three quarters are paid less than $750 annually; and less than one tenth earn $1,000 a year. . . . These figures are not accurate, however, since they are all gross figures, including unemployment. They should be reduced by, perhaps, 20 per cent., varying with the year, the location and the industry."

Such figures as these tend to explain the accuracy of the statement that voluntary contributions toward insurance and pensions on the part of the working classes occur only with a great minority of the individuals in these classes. This is evident in whatever countries voluntary insurance or pensions are in vogue. Mere living expenses of a man with a family on such wages must be such that unemployment soon changes his poverty into destitution. It explains further the well-known fact that previously in industrial accidents, when the physician has depended on the patient for his payment, the proportion of the fees obtained have been small indeed compared to the amount of work done for which he could justly claim recompense. Unless there was some agreement with the employer for the care of the industrial workers, physicians in the United States heretofore have given yearly in charity services that have aggregated millions of dollars. The compensation laws have brought this out very clearly, because even with the small fees paid for industrial work, the sum total of moneys paid for medical services is sufficient to cause comment in the various annual reports of the industrial boards and commissions. On a conservative estimate, one is justified in believing that fully one half of the work formerly done has been without remuneration.

In Massachusetts it has been found that after two weeks, when the Industrial Accident Board ceased to pay hospital fees for the injured workman, it was impossible to collect from patient or friends any further moneys for hospital services in from 50 to 99 per cent. of the patients. It is doubtful if the experience of physicians has varied much from this experience of the hospitals.

There is in this country a tendency to criticize the cost of medical service under the compensation laws in the various states. The following statistics show the cost abroad over a number of years and the relation of medical fees to other expenses and to total expenditure. In Germany, according to Gibbon, where for the first thirteen weeks the sickness societies care for both accidents and sickness, the Leipzig District Society shows that in 1888 the payment for medical services was 19 per cent. of the whole; in 1893, 20 per cent.; 1898, 21 per cent.; 1903, 21 per cent.; 1908, 22 per cent.; 1910, 21 per cent. It is interesting to note further that the average cost per member of medical services in all the German societies in 1888 was 58 cents; in 1893, 75 cents; in 1898, 83 cents; in 1903, $1; in 1908, $1.37; in 1910, $1.45. Gibbon mentions that the increase has been due partly to the extension of insurance to more and more members of the community. The doctor has had to press more strenuously for a living wage from his insurance patients, at the same time he has organized himself sufficiently well to press with a fair degree of success. Some part of the rise is remuneration has been nominal rather than real.

2. Nearing: Wages in the United States, New York, The Macmillan Company, 1908-1910.

In Denmark, the Table 15, quoted from Gibbon, gives the increased proportion of the total expenditure of sickness societies spent on medical services:

TABLE 15.—INCREASE OF EXPENDITURE OF SICKNESS SOCIETIES FOR MEDICAL SERVICE

	1893 %	1901-1906 %
Payments to doctors and for conveyance	27.7	33.4
Medical and surgical requirements	12.7	12.1
Hospital treatment	5.3	8.7
Money benefit	45.6	36.5
Administration	8.7	7.3
	100.	100.

The increase is due in a large measure to the increased number of persons insured, especially women and persons of small means. The percentage of total expenditure paid to doctors for treatment in 1909 by the societies in Copenhagen and Frederiksberg was 22 per cent.; by the societies in provincial towns, 33 per cent.; by the societies in the island rural districts, 48 per cent.; by the societies in the Jutland rural districts, 57 per cent.; average by all societies, 37 per cent. These statistics of Denmark are particularly interesting as they give the percentage of expenditure for medical service by societies located in cities, in provincial towns, and in country districts, made up of mainland and islands. Often in these districts there are large areas of land with very few physicians in which mileage estimates come in to a very large extent.

Tables 16 and 17, from Austria and Germany, from the twenty-fourth annual report of the Commissioner of Labor, are interesting.

TABLE 16.—RATIO OF VARIOUS BENEFITS TO TOTAL BENEFITS IN SICKNESS INSURANCE SOCIETIES, AUSTRIA, 1906

Societies	Per Cent.
Sick benefits	58.0
Medical assistance	18.3
Medicines	13.5
Hospital treatment	7.6
Funeral benefits	2.6
Total	100.

TABLE 17.—PERCENTAGE OF VARIOUS KINDS OF BENEFITS PAID, SICKNESS INSURANCE SOCIETIES, GERMANY, 1907

	Per Cent.
Physicians	23.11
Medicines	14.66
Sick benefit	44.33
Lying-in benefit	2.01
Death benefit	2.60
Hospital cost	13.21
Care of convalescents	.08
Total	100.

It is evident from these statistics that the percentage of medical expenses in any compensation scheme must be considered as a certain percentage of the total expenditures for such insurance. It is not just to claim that medical fees are too high and therefore must be reduced, because the fee of the doctor is overloaded with various charges and lumped under the name medical.

In an interesting discussion of medical fees in the report of the American Federation of Labor and National Civic Federation, various state commissions are quoted and the general tendency is to compare the cost of medical compensation with the cost of compensation amounts paid to the workman, as, for instance, in the second annual report of the Industrial Commission of Wisconsin it is stated that the cost of medical attendance, including hospital and nurse hire, is in excess of 50 per cent. of the indemnity. That is, for each dollar paid to the injured workman in compensation, an additional fifty cents is paid to the doctor for medical attendance, but it is also definitely stated that medical attendance includes hospital and nurse hire.

This report goes on further to say:

"According to statements made to us by different insurance companies, the amount paid by them for medical services as compared with the amount paid for compensation varies greatly, though the experience in some states has not been large enough to give a true average. For Massachusetts, one company reports that on a wide experience the amount for medical expense is 43.8 per cent. of the amount paid to workmen; another company gives 29 per cent. and still another 40 per cent. . . . In considering the medical cost and the variations between the different percentages here given, it must be borne in mind that it is possible that in some of the reports given this commission there have not been fully considered to be paid as compensation in the future for accidents extending beyond the year covered. If this be true, the proportion of medical cost during the first year may be greater than it will be in succeeding years. One company reported to this commission that the amount paid for medical services in Massachusetts was 29 per cent., in Illinois 38 per cent., and in New Jersey 20 per cent., and in discussing the question further said:

"'Although Massachusetts shows a percentage slightly larger than the figures of Illinois, the figures do not show that the medical expenses have been greater in Massachusetts—they are simply greater in relation to the scale of compensation paid to the workmen.'"

Attention is further drawn to the fact that many accidents under the laws with waiting periods must have medical attendance without other compensation. For instance, in Massachusetts, in 41,256 accidents, 26,609 required medical services without compensation, 10,827 required both medical services and compensation, and 3,820 received compensation without medical services. The average cost for medical attention per case, or average amount received per case treated, is, in Ohio, $9; Michigan, $2.11; New Jersey, $2.79; Illinois, $5.90; Massachusetts, $4.47. The usual method of comparing the cost of medical services as a ratio to the compensation of workmen is an unjust method of computation. It is perfectly true as a ratio between compensation to workmen and compensation to physician under the law, but it is a false basis of computing medical expenses. The only true ratio of medical expenses is the ratio of such expenses to the total expenditure under the compensation acts. It is difficult at present to obtain these figures for the various states, but in Massachusetts it seems to be 22 per cent. and in New York 28 per cent. of the total. All these discussions are careful to leave out all management expenses, all hospitals and nursing or medical and surgical requirements, and charge all the latter expenses to the surgeons' fees. There is a wide difference between medical fees and hospital fees in some states, as, for instance, in the municipal hospitals of New York City the authorities are permitted to charge for the hospital services and nurses to workmen under the compensation act of New York, but the surgeons serving in the municipal hospitals are forbidden to receive any fees for the care of these patients. Here, under this usual rating of medical services, the amount paid on the ratio of compensation to workmen may be considerable, but the actual fees of the medical profession are zero. In how many other states this peculiar situation exists is unknown. Table 18 shows a just method of dividing the various items in estimating the fees paid to surgeons.

The published fees for industrial work under which the surgeons are working are not higher than they are justified in charging and do charge in similar communities for like services. Because the surgeon now receives 100 per cent. for work done when paid by the state, the total amount received by him seems strikingly large. The same commission declares that in spite of many statements that doctors are not making excessive charges, an opinion prevails that cost of medical services is excessively high and that physicians knowing that bills are to be paid either by employees or insurance companies charge higher rates than they would if their services were to be paid for by the employees for whose benefit the services are rendered. This, of course, is the expression of an opinion by men who were employers and leaders in the labor movements.

JUST FEES FOR PROFESSIONAL SERVICE

That there is a general endeavor among surgeons working under the compensation laws to overcharge is absolutely false. That a few members of the profession have greedily

endeavored to obtain more than they deserved is undoubtedly true, and any referee board of physicians or surgeons to which these claims have been referred has been the first to condemn the excessive amounts claimed. There is no question that public opinion among the medical profession condemns overcharging the state or overcharging for this industrial work as severely as it condemns any other dishonest practice perpetrated by the members of the profession.

There is naturally a general desire on the part of employers to reduce medical and all other expenses and thus to obtain a lower rate for their insurance, to have the medical services rendered to them under a definite salary or some form of specified contract. It is hard for the lay mind to grasp the reasons why the medical profession resent any general contract practice. The state sanctions the practice of medicine as an individual privilege and demands that all acts of a physician shall be individual, individual in his charges, individual in his services. It is a personal relation which the state demands shall be given in a personal manner. Under contract practice this relationship ceases or is so modified that it loses the best elements of personal service. Moreover, the physician or surgeon realizes that under contract he is liable to be pushed to the commercial limit irrespective of services given, that he is soon required, because of excess of number of patients and excess of work, to give in infections among injured workmen causing permanent, partial or total disability. The already quoted experience of one firm in Bavaria is pertinent at this point; $8,000 was spent in the highest priced medical fees and $160,000 was saved in compensation expenses.

STATE MEDICAL ASSOCIATIONS

In an endeavor to obtain information concerning the working of the compensation acts in the various states and to obtain an opinion on the amount of fees paid for services to workmen earning $1,000 a year or less, the Judicial Council wrote to the state secretaries of all the component associations of the American Medical Association. Thirty answers were returned to these inquiries. As a criterion for judgment, the fee bill which was in vogue in New York State during the year July 1, 1914, to July 1, 1915, was taken and sent with each letter. It is evident from the replies received that California, Massachusetts, Michigan, New York and Ohio took steps before the law went into effect, through their state societies, to endeavor to obtain some understanding as to what was a just fee to be charged in these communities for industrial work and to improve the relations between the medical board and the industrial board or compensation commission in these states. In New York the insurance societies presented the fee bill in question.

TABLE 18.—A JUST METHOD OF DIVIDING THE VARIOUS ITEMS IN ESTIMATING SURGEONS' FEES

	District	Factory	Building Trades	Trade Guild	Private Friendly	All Societies
Percentage of Total Expenditures						
Sick benefits	45.5	53.0	34.9	49.0	55.7	50.0
Medical assistance	17.1	15.0	21.0	14.8	15.0	15.7
Medicines	11.3	14.1	9.2	10.7	9.6	11.7
Cost of hospital service	8.2	4.4	26.9	8.1	5.0	6.6
Funeral expenses and benefits	1.9	2.1	1.3	2.4	3.0	2.2
Total benefits	84.0	88.6	93.3	85.0	88.3	86.3
Management expenses	12.4	0.5	3.2	12.7	10.2	8.7
Other expenditure	3.6	10.9	3.5	2.3	1.5	5.0
Percentage of Total Income						
Sick benefits	45.4	55.6	39.4	47.6	52.6	49.9
Medical assistance	17.1	15.7	23.7	14.4	14.1	15.9
Medicines	11.3	14.8	10.4	10.4	9.0	11.6
Cost of hospital service	8.1	4.6	30.4	7.9	4.8	6.6
Funeral expenses and benefits	1.8	2.3	1.4	2.3	2.8	2.2
Total benefits	83.7	93.0	105.3	82.6	83.3	86.0
Management expenses	12.4	0.5	3.6	12.3	9.7	8.7
Other expenditures	3.6	11.5	4.0	2.2	1.4	5.0

This tables shows the rates of various items of expenditure to total in sickness insurance societies in Austria, 1906 (Frankel and Dawson).

return a deteriorated service, for he cannot give the proper attention, the length of time and hence the excellence of service that should be given by doctor to patient. This is a noticeable evil in lodge practice in this country. It is an occasional evil in the services under the sick insurance societies of Germany and Denmark, and has already become a noticeable feature under the present insurance act in some localities of Great Britain. Any contract, such as often given by railroad surgeons, has never been considered unethical because a surgeon has been able to retain the excellence of work done in relation to the amount given him to do. But in any large service, which is contract service, the evils here mentioned are so excessive and the pay for such overworked services so unjustly small that they stand in the minds of the profession as so objectionable as to be universally condemned. They are condemned not because they are contracts but because of the method in which the lay boards demand that they shall be fulfilled. It is well for employers and industrial boards to remember that there are laws of diminishing returns for professional services as in other economic conditions—there is often much economy in a high-priced surgeon. It is often noticeable that pus and politics go together; and he who shaves the medical fee piles up compensation expenses. A stingy man hires a poor surgeon and begets many infections and much disability. Commissioner Darlington of New York has recently drawn attention to the large amount of avoidable

It was signed by the compensation committee of the medical society as an endeavor to obtain a fair standard of fees for such work. It was accepted by the state compensation commission as a medical expression of what was a fair fee for such work, and it could not bind any physician who did not sign it as a personal agreement between himself and the insurance societies. It was agreed that this fee bill should stand as a fair standard in New York State for the year. After six months' trial it became evident that it was highly objectionable to the majority of the profession because of flat rates for services, because of interpretation on the part of the insurance societies that it was a maximum fee bill, not a minimum fee bill, and because of its inflexibility it seemed to work injustice to the individual member of the profession. It was therefore repudiated at the annual meeting of the Medical Society of the State of New York, and after July 1, 1915, there will be no fee bill in force in New York State. It is interesting to note, however, that sixteen of the thirty replies, over 50 per cent., considered the rates as expressed in this fee bill as very fairly representing the rates for similar services in their community. Among these sixteen replies are New England States, Middle Atlantic States, Gulf States, Central Western States, Northwestern States and States on the Pacific Coast. This is interesting as proving the statements of Scott Nearing that wages range fairly evenly over the United States and that remuneration to physicians for work among these industrial

classes averages in a correspondingly even manner. The criticism from six other states was that these rates were altogether too low. This criticism comes from the Middle West and Far Western States. Among the eight remaining there were several who disapproved highly of fee bills for several reasons.

In considering fee bills in general, the opinion is frequently expressed that a fee bill for a special kind of work in any community, such as work under the compensation acts and expressed as a minimum fee bill for such work, soon becomes a maximum fee bill for other members of the community. Patients will demand to be treated for the same schedule of fees whether these patients are under the compensation act or not, and if there be two fee bills, the low one for special work tends to replace the higher bill in general work. This, of course, can hold only among people with small incomes; but this means the great majority of the people. The flat rate element of any fee bill, as expressed especially in the New York fee bill, works an injustice in many instances. Such a rate is made by the insurance company on the basis of averages for a given injury. This is fair for the insurance company dealing with large numbers of cases, but is not fair to the individual surgeon who deals with few cases, as any single case judged by averages may be overpaid or greatly underpaid for the surgical service rendered. Inflexibility, therefore, in a fee bill tends manifestly to unfairness in the treatment of the individual surgeon, and is naturally resented by many individuals throughout the state. If rates in the fee bill can vary between certain stated amounts, as in the West Virginia fee bill, it will give greater flexibility and render justice to the individual surgeon, or if, as under the industrial commission of Ohio, it is specifically stated that the fee bill is used as a guide and is not a hard and fast agreement between any individual and the insurance companies.

The multiplicity of terms and possibilities of accident and stated fees for each possibility as given in the New York State fee bill does not compensate in the minds of the profession for the injustice of the flat rate and the general inflexibility of this fee bill. The accompanying comparison of fee bills of the different states is inserted here for purposes of reference for any members of the profession, if an occasion should arise when the consideraton of a fee bill may be required under any new compensation act that may be passed.

In considering the formation of any new fee bill, it is worthy of consideration to remember that three quarters of all accidents require less than two weeks' care and that the daily visit to the house and the daily office and dispensary visit will form a large item in the total amounts of surgical compensation. Further, as has already been referred to, in considering the end-results of fractures, all fee bills give the major fees to the amputation which, in ordinary cases, requires vastly less skill from a surgical point of view than the fracture. Moreover, as far as the economic results to the patient are concerned, the fracture offers some hope of permanent rehabilitation, whereas the amputation must remain as a partial or total disability. The work on fractures in future will stimulate the medical profession to the employment of their greatest ingenuity and skill in obtaining their best results. It will in the future require a greater exhibition of judgment and skill than any other form of injury to obtain the minimum total or partial disability. Under these circumstances, it should be paid the highest rate of compensation to the medical man. This is contrary to our present fee bills.

HOSPITAL SERVICE

The relation between hospitals and the compensation acts is one which opens up many possibilities for disagreement between the profession, the boards of trustees of hospitals, and the workmen's compensation commissions. As is well known, in the majority of municipal hospitals in this country, physicians and surgeons are not permitted to charge fees to the charity patients who come under their care. This has heretofore been generally accepted as just and the experience gained has been the remuneration to the physician or surgeon for time spent and trouble taken. As was referred to above, the present situation in New York City is anomalous. The corporation counsel of New York City has decided that the authorities in the municipal hospitals may charge for the board and lodging of patients under the compensation act, but surgeons in the hospital shall not be permitted to charge for their services. This unquestionably prevents the situation arising of a patient who is not under compensation feeling aggrieved for attention given to a patient who is under compensation and accusing the surgeons of undue favoritism. There is no question that surgeons in municipal hospitals must treat all patients equally well, and if a surgeon is paid for one patient and not for another, there will continually arise these accusations of favoritism brought by the envious and the dissatisfied which, however unjust, will cause unceasing trouble.

The hospital question in regard to compensation acts has further brought out the fact that most hospitals have been charging for patients in their general ward less than it has cost the hospital per week per patient to care for them. This is best expressed by the joint committee recommendations in the first annual report of the Board of Compensation Commissions of Connecticut:

"If the spirit underlying this act is to make each industry carry the expense of the casualties that occur in the conduct of that business, it fails of doing so when the hospitals and physicians are forced to care for them at a loss or as charity cases. It costs the hospitals from $10 to $15 per week to care for cases. If compensation cases are placed in public wards at $7 per week, the balance has to be made up by contributions that are made for charity, and physicians should not be asked to treat these cases for nothing in hospitals any more than they are asked to treat them outside for nothing."

The other hospital questions under the compensation act open up other relations which must be left for the future to settle, such as the relation of the outside surgeons to the hospital in caring for patients in the hospital when these surgeons are not attending surgeons to the hospital. These compensation laws bid fair to raise new standards in surgery and to change the judgments of results of many injuries, such as fractures, from the point of view of mere recovery to the basis of the percentage of human efficiency regained and the lack of permanent or partial disability left in the workman. This is equally certain to bring new standards of hospital efficiency both in the rapidity of recovery of the patient and the retention of his economic value.

NEW SOCIAL CONDITIONS

The Judicial Council in presenting this voluminous report to the House of Delegates has done it from the educational point of view. The Council has realized that on the subject of workmen's compensation there is no easily accessible collection of facts and opinions to which the average medical man can refer. The Council further realizes that in the near future the majority of medical men in this country must face a new social condition in connection with the laws of workmen's compensation in accident and probably in sickness. In whatever country the social equilibrium has been upset by new laws on compensation, there have followed in the wake of the compensation for accidents other insurances tending toward the complete insurance systems of England and Germany. Laws for workmen's compensations exist in more than half of the states of the Union to-day, and already pensions for widows and orphans have followed in a number of states. Illinois passed the first mothers' pension in 1911, California and Colorado in 1912, and similar laws have followed in Washington, Utah, South Dakota, Idaho, Minnesota, Iowa, Nebraska, Ohio, New Jersey, Pennsylvania, Massachusetts, Michigan, Wisconsin, Oregon and New York. Milwaukee and St. Louis have established similar systems independently of state action. In a recent article[3] in THE JOURNAL of the American

3. Rubinow, I. M.: Social Insurance and the Medical Profession, THE JOURNAL A. M. A., Jan. 30, 1915, p. 381.

TABLE 19.—MEDICAL AND SURGICAL SCHEDULE OF RATES

SPECIFIC INJURIES

Treatment or Injury	New York † A Flat rate including first aid, operation and full treatment	New York † B Operation only	New York † C Total limit for full subsequent treatment	California	Oregon	Ohio	West Virginia
Amputations:							
Hip	$75.00	$50.00	$25.00	$75.00	$75.00	$75.00	$30.00 to $50.00
Thigh	50.00	35.00	15.00	40.00	50.00	50.00	15.00 to 25.00
Foot	50.00	35.00	15.00	25.00	40.00	30.00	.....
Leg	40.00	25.00	15.00	25.00	40.00	25.00	15.00 to 25.00
Shoulder joint	55.00	40.00	15.00	40.00	50.00	50.00	15.00 to 25.00
Arm, forearm or hand	40.00	25.00	15.00	25.00	40.00	25.00	15.00 to 25.00
Metatarsal or metacarpal—one	20.00	10.00	10.00	.....	.....	10.00	15.00
Metatarsal or metacarpal—two or more	25.00	15.00	10.00	.....	.....	15.00	.....
Finger or toe	15.00	5.00	10.00	5.00	.....	5.00	2.50 to 5.00
Fingers or toes—two or more	20.00	10.00	10.00	10.00	10.00	10.00	2.00 each
Ankle joint	40.00	25.00	15.00	25.00	40.00	25.00	.....
Knee joint	50.00	35.00	15.00	40.00	40.00	35.00	15.00 to 25.00
Elbow joint	40.00	25.00	15.00	.....	40.00	25.00	15.00 to 25.00
Wrist joint	40.00	25.00	15.00	25.00	40.00	25.00	15.00 to 25.00
Fractures:							
Upper arm	$20.00	$15.00	$ 5.00	$25.00	$30.00	$15.00	$10.00 to $20.00
Forearm—one bone (shaft)	15.00	10.00	5.00	10.00	25.00	12.50	10.00 to 20.00
Forearm—both bones (shaft)	20.00	10.00	10.00	25.00	35.00	12.50	10.00 to 20.00
Forearm—Colles'	25.00	15.00	10.00	.....	.....	15.00	.....
Femur	30.00	20.00	10.00	25.00	50.00	25.00	15.00 to 30.00
Lower leg—one bone	20.00	10.00	10.00	10.00	20.00 F. to 30.00 T.	12.50	10.00 to 25.00
Lower leg—both bones	25.00	15.00	10.00	25.00	40.00	15.00	10.00 to 25.00
Jaw	20.00	10.00	10.00	10.00	20.00	10.00	7.50 to 15.00
Ribs—one or more	10.00	5.00	5.00	5.00	10.00	5.00	5.00
Patella	30.00	20.00	10.00	15.00	40.00	20.00	10.00 to 50.00
Pubic bone } or Pelvis	15.00	2.00	13.00	10.00	.....	.....	.....
Acetabulum }	50.00	30.00	20.00	.....	50.00	30.00	.....
Metatarsal or metacarpal	5.00	2.00	3.00	5.00	10.00	5.00	2.00 to 5.00
Fingers—one or more	5.00	2.00	3.00	.....	10.00	5.00	2.00 to 5.00
Toes—one or more	10.00	5.00	5.00	.....	10.00	5.00	2.00 to 5.00
Coccyx	15.00	2.00	13.00	.....	.....	10.00	.....
Sacrum	15.00	2.00	13.00	.....	.....	10.00	.....
Sternum	10.00	5.00	5.00	.....	.....	10.00	.....
Spine	30.00	10.00	20.00	.....	.....	.....	.....
Lacrimal bone	10.00	5.00	5.00	.....	.....	.....	.....
Malar bone	10.00	5.00	5.00	.....	.....	5.00	.....
Scapula	20.00	10.00	10.00	15.00	25.00	12.50	5.00
Clavicle	15.00	5.00	10.00	15.00	20.00	12.50	5.00 to 7.50
Nasal bones	10.00	5.00	5.00	10.00	10.00	5.00	3.00
Compound fracture	25% extra			50%	.....	25%	.....
Operation for wiring of bones or plating	50% extra			.....	.....	100%	.....
Dislocations:							
Shoulder	$15.00	$ 5.00	$10.00	.....	$20.00	$10.00	$10.00
Elbow	10.00	5.00	5.00	.....	20.00	8.00	10.00
Wrist	10.00	5.00	5.00	.....	10.00	8.00	5.00
Hip	25.00	10.00	15.00	$10.00	40.00	15.00	15.00
Knee	20.00	5.00	15.00	Easy reductions without anesthesia or assistants, $5.00.	.....	10.00	.....
Patella	10.00	5.00	5.00		.....	5.00	.....
Ankle	20.00	5.00	15.00		10.00	8.00	5.00
Clavicle	15.00	5.00	10.00		.....	8.00	.....
Fingers—one or more	3.50	1.50	2.00		5.00	2.50	2.00
Toes—one or more	5.00	2.00	3.00		5.00	2.50	.....
Jaw	5.00	3.00	2.00		10.00	5.00	5.00
Ribs—one or more	5.00	3.00	2.00		.....	.....	.....
Spine	25.00	15.00	10.00		.....	.....	.....
Sternum	5.00	3.00	2.00		.....	.....	.....
Coccyx	10.00	5.00	5.00		.....	.....	.....
Metacarpal—one or more	5.00	3.00	2.00		.....	5.00	.....
Metatarsal—one or more	10.00	5.00	5.00		.....	5.00	.....
Carpal—one or more	5.00	3.00	2.00		.....	5.00	.....
Tarsal—one or more	10.00	5.00	5.00		.....	5.00	.....
Scapula	15.00	5.00	10.00		.....	.....	.....
Pelvis	10.00	5.00	5.00		.....	.....	.....
Special Operations:							
Trephining of skull	$50.00	$40.00	$10.00	$50.00	.....	$50.00	$25.00 to $50.00
Laparotomy for traumatic peritonitis	50.00	40.00	10.00	.....	.....	$0.00 to 75.00	.....
Fixation or suturing of kidney	75.00	50.00	25.00	.....	.....	.....	.....
Laparotomy for rupture or wound of bladder	50.00	40.00	10.00	.....	.....	.....	.....
Laparotomy for rupture or wound of liver	50.00	40.00	10.00	.....	.....	.....	.....
Laparotomy for rupture or wound of spleen	50.00	40.00	10.00	.....	.....	.....	.....
Laparotomy for rupture or wound of stomach	50.00	40.00	10.00	.....	.....	.....	.....
Laparotomy for circumscribed aneurysm	50.00	40.00	10.00	.....	.....	.....	.....
Trephining bone abscess	10.00	5.00	5.00	.....	.....	.....	.....
Caries or necrosis—removal of	15.00	10.00	5.00	.....	.....	.....	.....
Tracheotomy	40.00	25.00	15.00	.....	.....	.....	.....
Intubation	10.00	5.00	5.00	.....	.....	.....	.....
Rupture of abdominal wall	25.00	10.00	15.00	.....	.....	.....	.....
Nerve—section or suturing of	10.00	5.00	5.00	.....	.....	.....	.....
Injection of antitoxin for tetanus or hydrophobia	Each treatment $5.00, total not to exceed $25.00.						
Special Operations:		10.00	15.00	.....	.....	.....	.....
Anthrax—cauterization or excision	25.00			.....	.....	.....	.....
Ligating important arteries (separate operation)	10.00	5.00	5.00	.....	.....	.....	5.00 to 10.00
Ligating small arteries (separate operation)	5.00	3.00	2.00	.....	.....	.....	.....
Hernia—reduction by taxis and applying truss (subsequent treatment none)	.....	.....	.....	5.00	.....	.....	.....
Herniotomy	5.00	35.00	15.00	30.00	$50.00	.....	25.00
Enucleation of eyeball	50.00	25.00	15.00	30.00	.....	25.00 to 35.00	.....
	40.00						

TABLE 19.—MEDICAL AND SURGICAL SCHEDULE OF RATES (Continued)

SPECIFIC INJURIES

Treatment or Injury	New York † A Flat rate, including first aid, operation and full treatment	New York † B Operation only	New York † C Total limit for full subsequent treatment	California	Oregon	Ohio	West Virginia
Sprains:							
Shoulder	$5.00	$2.00	$3.00	$5.00	*		**
Elbow	5.00	2.00	3.00	5.00	*		**
Wrist	5.00	2.00	3.00	5.00	*		**
Hip	5.00	2.00	3.00	5.00	*		**
Knee	5.00	2.00	3.00	5.00	*		**
Ankle	5.00	2.00	3.00	5.00	*		**
All other joints	3.00	1.00	2.00	2.00	*		**
Special Items:							
Minor operations—repair of small wounds, including suturing and dressing	$5.00	$2.00	$ 3.00	$2.50		$1.00 to $2.00	
Repair of large wounds requiring extensive suturing and dressing	7.50	3.00	4.50	5.00		2.00 to 5.00	
Abscess—incision	4.00	2.00	2.00	2.50			
Laminectomy (special operation)	75.00	50.00	25.00	75.00		75.00	
Paracentesis, thoracicis or pericardii (special operation)	15.00	10.00	5.00	5.00			
Rupture of tendon—large	10.00	5.00	5.00	25.00			
Rupture of tendon—small	5.00	2.50	2.50				
General Items:							
Assisting at operation—major	$10.00			$10.00	$10.00		$5.00
Assisting at operation—minor	2.00 to 5.00			5.00	5.00	$5.00	
Mileage beyond city limits—per mile one way only	.50			.50 day .75 night	.75 day 1.00 night	Extra if possible	
Examination in lunacy—including written report and one days' attendance in court or before commission	50.00						
Subsequent court or commission attendance, per day	25.00						
Urinalysis, when specially requested	2.00						
Complete physical examination and report by other than attending physician	3.00						
Necropsy, complete, with written report	50.00						
Necropsy, attending but not performing	10.00						
Microscopic and chemical analysis of organs	25.00 extra						
Testimony in court or before commission as to simple fact of injury	10.00			10.00	10.00		
Testimony at coroner's inquest	5.00						
Expert testimony, per day	15.00 to 25.00						
Introducing catheter	2.00			2.50			
Roentgenogram, including plate	5.00				5.00 to 10.00		7.50 to 15.00
Subsequent roentgenograms, including plates	3.00 each						
General anesthetic, administration of	5.00			5.00	5.00	5.00	5.00

Ordinary Items:	First Aid	Subsequent Treatment, Office	California	Oregon	Ohio	West Virginia
Ordinary day visit at house, including antiseptic dressing when necessary	$2.00	$1.00		$2.00	$2.00	
Ordinary day visit at hospital, including antiseptic dressing when necessary	1.00	1.00		1.50	2.00	
Ordinary office treatment, including antiseptic dressing when necessary	1.00	1.00		1.00	1.00	.50 to 1.50 Ordinary
Visit, including antiseptic dressing and necessary operative procedures in ordinary cases of incisions, punctures, lacerations or contusions	2.00	1.00	$2.00	2.00		.50 to 2.00 Extraordinary 2.00 to 4.00
Night visit, 9 p. m. to 7 a. m.	3.00			3.50		
First attention at office, including operative procedure and dressing of ordinary wounds	1.50	1.00		2.00		
Removal of ordinary foreign body from conjunctiva, at office	1.00		2.00	2.00		1.00
Removal of foreign body from cornea	1.50	1.00	3.00	2.00		

California fee in fractures includes reduction and first dressing.
Oregon fee in fractures includes reduction and subsequent treatment.
Ohio. All fees are only a guide after attention made "Miscellaneous."
West Virginia. Fracture reducing and first dressing. The fewer the after-dressings the larger the initial fee. The same rule in amputations for after-treatment.

* Sprains included under treatment and first dressing of wounds of soft parts, burns, strains, contusions, bruises, arresting hemorrhage, removing foreign body from eye, $2.00.

** Treatment and dressing of lacerated wounds of the soft parts, burns, sprains, strains, bruises, arresting hemorrhage, etc., ordinary case, 50c to $2.00; extraordinary case, $2.00 to $4.00.

† July, 1914, to July, 1915.

Medical Association, Rubinow states definitely that for two years there has been under consideration a state sickness insurance law to be presented to the various state legislatures in the near future. It is evident, therefore, that once the old social and legal equilibrium has been upset, society tends to follow to the logical conclusion until it reaches a new equilibrium under a new social system. We have in this country a disjointed mass of insurance schemes and pensions represented by life insurance, fraternal societies, so-called industrial insurance, which is in this country but funeral insurance, and health and casualty insurance. There is the huge pension fund of the United States which has finally become the old age pension of those who fought on the Northern side in the Civil War. There are various industrial pensions for invalidity and old age, as in certain railroads or in certain large industrial establishments. In several large cities in the Union there is a rapidly growing expansion and extension of activities of the health board which constitute state medicine. All these, at present, form an unrelated mass, all tending to give social aid in time of varying needs to different members of the community. In several countries abroad the same various social elements have been combined into some form of workable adaptability by which various accident and sickness insurance, invalidity and old age pensions have been brought together to form social forces which have tended to reduce the destitution of

large masses of human beings. These forces unquestionably tend to improve the social condition in any given community, and for the carrying out of any scheme tending to human betterment, the medical profession must necessarily be included, whether it be to judge of sickness or health insurance, whether it be for the prevention of the intensity of injury in the individual from accident or for the prevention of the spread of disease in a community at large. The medical profession will accept its responsibility in these new social conditions as it has always accepted its responsibilities in the past. The Judicial Council therefore presents this abstract of existing social insurance in this country and abroad.

Respectfully submitted,

ALEXANDER LAMBERT, Chairman.
JAMES E. MOORE,
HUBERT WORK,
GEORGE W. GUTHRIE,
A. B. COOKE,
ALEXANDER R. CRAIG, Secretary.

The following bibliography has been used in preparation of the foregoing report, and has at times been freely quoted without special acknowledgment:

Senate Document No. 338, Sixty-Second Congress, second session. Message of the president transmitting report of Workman's Compensation Commission.
Senate Document No. 419, Sixty-Third Congress, second session. Workmen's Compensation Investigation by commission of the American Federation of Labor and the National Civic Federation.
Twenty-Fourth Annual Report of the Commissioner of Labor, 1909. Workmen's Insurance and Compensation Systems in Europe, Vols. I and II.
Rubinow: Social Insurance.
Henderson: Industrial Insurance in the United States.
Schwedtman and Emery: Accident Prevention and Relief.
Seager: Social Insurance.
Nearing: Wages in the United States.
Gibbon: Medical Benefit in Germany and Denmark.
Frankel and Dawson: Workman's Insurance in Europe.
Eastman: Work, Accidents and Law.
Squier: Old Age Dependency in the United States.
Lewis: State Insurance.
Freidensburg: The Practical Results of Workingmen's Insurance in Germany.
First Annual Report of the Industrial Board of Massachusetts.
Second and Third Annual Reports of the Industrial Commission of Wisconsin.
First Annual Report of the Board of Compensation Commissioners of Connecticut.
First Annual Report of the Workmen's Compensation Commission of Missouri.

During the presentation of this report Dr. Lambert moved that the House of Delegates go into executive session in order to receive certain sections of the report.

Seconded and carried.

The House then went into executive session.

The House then adjourned its executive session and continued in open session.

Dr. Perry Bromberg, Tennessee, moved that the report of the Judicial Council be referred to the Reference Committee on Reports of Officers.

Seconded and carried.

Report of Council on Health and Public Instruction

Dr. Henry B. Favill, Illinois, Chairman, read the report of the Council on Health and Public Instruction, which was referred to the Reference Committee on Legislation and Political Action. The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

The Council on Health and Public Instruction has, during the past year, further developed the program outlined in its report for 1914. This program includes:

1. A thorough investigation of present public health conditions in the United States with a view to securing more accurate information on all phases of the public health program than is now available.

2. Education of the public by every possible means in order that the people may understand the enormous advances in scientific medical knowledge during the last generation and the possibility of utilizing such knowledge in the prevention of disease, the reduction of the death rate and the prolongation of human life.

3. The crystallizing of such educated public sentiment in necessary public health laws, regulations and ordinances which will render possible a conservation of human life, commensurate with our advancing knowledge and which will render such laws more effective through an educated and enlightened public opinion.

The entire energies and resources of the Council have been devoted during the past year to the development of this program. The reduced appropriation, because of financial conditions, has rendered it impossible for the Council to attempt to develop any new lines of work. Its activities have therefore been confined to carrying on work already inaugurated.

INVESTIGATION OF PRESENT PUBLIC HEALTH CONDITIONS

As stated in last year's report, this subject naturally divides itself into four parts; namely, investigation of federal health activities, state health activities, municipal health activities and voluntary public health acticities carried on by independent organizations.

1. The study of federal public health activities and the consideration of advance plans for an adequate survey of the efforts of the federal government in the public health field have been under discussion during the year, but no practical plan within the means of the Council has as yet been devised. The consideration of this subject will be continued during the coming year.

2. As stated in the report for 1914, the Council commissioned Dr. Charles V. Chapin, Commissioner of Health of Providence, Rhode Island, as special representative of the Council and directed him to make a comparative study of the activities, equipment and accomplishments of the various state boards of health. During 1914, Dr. Chapin visited each state board of health except one, securing data in the form of reports, bulletins, records of personal observations, etc., from which he has compiled a report on state public health work which is now in course of publication. This report marks the completion of the first effort which has been made to collect comprehensive data on state board activities, with a view to the ultimate standardization and classification of all state boards of health. Its publication marks the completion of the first one of the four comparative studies which the Council hopes to carry on. The distribution of this report among state health officers and others interested in public health will be of marked value and will afford an opportunity for a comparative study of the entire state public health situation such as has not heretofore been possible.

3. Practical considerations have prevented a similar study of municipal public health conditions, although a tentative list of cities having public health departments or bureaus of sufficient importance to warrant consideration has been compiled. Probably some different plan for the study of this field will be necessary. This subject will also be considered by the Council during the coming year.

4. In the fourth field of investigation, that of voluntary public health organizations, a distinct advance has been made during the past year, largely owing to the efforts of the Council. As stated in the report for 1914, the Central Committee on Public Health Organization instructed the secretary, Prof. Selskar M. Gunn, secretary of the American Public Health Association, to institute a survey of existing organizations by means of a voluntary questionnaire. In the fall of 1914, Professor Gunn sent out letters to every organization coming within the scope of the committee's inquiry. At a meeting of the committee held at the office of the Russell Sage Foundation, New York City, March 13, 1915, Professor Gunn presented a report in the form of a tabulation of the replies received to the questionnaire. The committee directed that the report be printed and distributed, and appointed a subcommittee consisting of the chairman of the committee, Mr. John M. Glenn, the secretary, Prof. Selskar M. Gunn, and the secretary of the Council as a committee to prepare, publish and distribute this report. It is now in process of publication and will shortly be distributed to the officers of the organizations

interested. The important facts brought out by the report will also be given publicity through THE JOURNAL of the American Medical Association, the *Press Bulletin* and the newspapers and magazines of the country. Without anticipating the details of the report, it is sufficient to say that the original contentions of the Council in inaugurating this movement have been fully sustained. The voluntary public health organizations of the country are in a most chaotic condition, resulting in much duplication of effort, waste of money and labor and interference of function. The publication and distribution of this report will make clear these facts in a way that would have been otherwise impossible, and will furnish the necessary data for the formulation of a plan for better organization and conduct of this work.

In addition to the influence exercised by the Council through the Central Committee, the Council has also been able to exercise a strong influence through the American Public Health Association. At its annual meeting in Jacksonville in December, 1914, the retiring president of the association, Dr. William C. Woodward, of Washington, one of the members of the Council, took as the subject of his presidential address, "A Plea for Efficiency and Economy and the Maintenance and Operation of Private Agencies Working for the Conservation and Promotion of Public Health." On invitation, the secretary of the Council presented a paper at the general session of the Association on "Coordination and Cooperation of Voluntary Public Health Organizations." Apparently the presentation of this subject was timely, as shown by the fact that it aroused more discussion and interest than any other matter presented to the Public Health Association. As a result, on motion of Dr. Hatfield, secretary of the National Association for the Study and Prevention of Tuberculosis, the association voted to ask all the other national voluntary public health organizations to join with it in a joint meeting in 1916 for the purpose of considering better methods of organization and management. This action was endorsed by the Central Committee at its meeting in March, and the secretary was instructed to write the executive officer of all voluntary organizations asking them to unite in arranging for such a meeting. It is highly probable that such a joint meeting will be held during the coming year and that some practical plan of coordination will be developed, with the possibility of the entire movement taking the form of a single great public health league or union by which the mass of the people can be organized for better health conditions.

PUBLIC EDUCATION

The second function of the Council, that of public education, has been conducted during the past year along the lines formerly mapped out.

Press Bulletin.—The *Press Bulletin* has been sent out to the newspapers of the country during the last year in the same manner and with the same results as heretofore. The newspapers of the country are showing an increasing tendency to utilize this material and to credit the Association and the medical profession with sincerity and disinterestedness in its educational efforts. In January, the secretary at the direction of the general manager sent to each of the 4,912 names on the mailing list of the *Bulletin* a return postal card asking them to indicate whether they desired the *Bulletin* sent to them for the coming year; 2,302 replies were received, of which 102 asked to have the *Bulletin* stopped and 2,200 asked to have it continued. As this is the first time that any expression of opinion has been asked for, this evidence of a desire on the part of 45 per cent. of the newspapers on the list to have the *Bulletin* continued is ample evidence of its value. Many editors, in addition to returning the card, expressed their appreciation of the work of the Council. One editor writes, "I do not think a newspaper, weekly or daily, could do better than to publish your editorials." Another, the editor of a labor journal, says, "I publish matter from your *Bulletins* at every issue. I find them very instructive and value them highly. You are doing a splendid work in the interest of public health and of human happiness." Another editor writes, "I have filled out the card and mailed it to you, but I feel that this does not carry with it my full appreciation of this service. You are doing a splendid work." Another editor writes, "Editors, as a rule, are almost buried every morning with press bulletins clamoring for attention, but I am frank in saying that yours is one of the few that is read from end to end every issue." Evidences of appreciation and approval in the form of comments were received from several hundred newspaper editors.

The *Bulletin* is now sent to a limited mailing list consisting of approximately 2,200 newspapers, the editor of which in each case has expressed his interest in the *Bulletin* and his willingness to use the material furnished. This mailing list can be still further increased by the addition of other publications interested in public health.

In addition to the direct work of the Council, there has been a marked increase in the interest shown by newspapers and magazines in public health matters. The most striking instance of this is the establishment by the Scripps-McRae Syndicate, of a special department on health as a part of their syndicate service. In the fall of 1914, the secretary of the Council was asked by the editorial management of the syndicate to advise with them regarding the best plan to follow in establishing such a department. Material in the form of pamphlets, bulletins, reprints, etc., prepared by the Council, was furnished the editorial department of the Press Association and advice, suggestions and criticisms have been given freely. This new departure was eagerly taken up by the newspapers of the United Press Association, practically all of them using the material furnished. The following extract from a letter from the editor of the Newspaper Enterprise Association, the feature bureau of the Scripps-McRae Syndicate, will best show the degree of understanding and cooperation that has been established between the American Medical Association and the press association.

Dear Dr. Green:

As editor of the Newspaper Enterprise Association (the special feature bureau of the Scripps newspapers) serving daily over ninety daily newspapers in as many American cities, I have felt for a long time that the press associations ought to cooperate with the medical profession in the education of the public on the prevention of disease.

Last fall, after discussing this question with you at length, I felt encouraged to formulate definite plans for this purpose. Jan. 1, 1915, I started a department in our press service called the "Keep Well" column. The newspapers which we serve at once adopted this department as one of their regular features. It has been from the start an unqualified success, all of the Scripps papers and a majority of the other papers which we serve using this material daily. Each instalment which we send out carries a "Keep Well" label, specially designed for this purpose, which serves to attract the attention of the reader to it. These articles do not in any case attempt to prescribe or to advise treatment. Preventive medicine, hygiene, sanitation and accepted principles of better living constitute the chief aim of all the matter printed in this department.

I feel that one of the strongest factors in making our "Keep Well" column a success has been the hearty cooperation which I have received from the American Medical Association. For this I owe you grateful acknowleigment for encouragement in starting this department and assistance in continuing it. The success which has attended our efforts is ample proof that newspapermen and physicians can work together effectively if they approach the task with a mutual desire to cooperate and to recognize the professional obligations and limitations of both the newspapers and physicians. Our "Keep Well" department is a pronounced success and will, I hope, be the beginning of a better understanding of preventive medicine on the part of the newspaper-reading public.

Very truly yours,

S. T. HUGHES.

Speakers' Bureau.—Owing to the limited appropriation this year, the work of the Speakers' Bureau was necessarily confined to furnishing speakers for a limited number of appointments. In September, 1914, the usual announcement in the form of an attractive printed pamphlet was sent to approximately 20,000 persons, including the secretaries of medical societies; women's clubs; educational institutions, including universities, colleges, state normals, teachers' institutes, state superintendents of schools and others; secretaries of local boards of trade and chambers of commerce; farmers' alliances and granges, etc. The number of applications received soon proved more than the Council could possibly finance. Speakers were furnished as far as there were funds available. After the $1,000 appropriated for this purpose had been exhausted, the secretary was compelled to inform all other

applicants that the Council had spent its entire appropriation for speakers' expenses and could cooperate in securing speakers only on condition that the local committees would defray their expenses. This was done in a large number of cases. The following tabulation will show the appointments filled by speakers of the Bureau, the attendance and the results, and the requests received for speakers after the funds were exhausted:

TABLE 1

1914	Speaker	Place	Attendance
June 11	Pearse, H. E.	Nevada, Mo.	....
June 18	Dodson, J. M.	St. Charles, Ill.	....
June 18	Freeman, A. W.	Morgantown, W. Va.	....
July 8	Sumner, G. H.	Ames, Iowa	225
July 21	Goodwin, E. J.	Warrensburg, Mo.	250
July 23	Lutz, F. J.	Shelbyville, Ill.	....
July 28	Knox, J. H. M.	Chestertown, Md.	100
Aug. 8	Eyclesbymer, A. C.	Grandview, Ind.	300
Aug. 8	Pettit, J. H.	Eureka, Ill.	300
Aug. 11	Pearse, H. E.	Odessa, Mo.	175
Aug. 14	Pettit, J. W.	Geneseo, Ill.	800
Aug. 16	Sumner, G. H.	Ida Grove, Iowa	1,100
Aug. 19	Sloan, M. F.	Terra Alta, W. Va.	275
Aug. 20	Fiegenbaum, E. W.	Godfrey, Ill.	350
Aug. 24	Heizer, W. L.	Jacksonville, Ill.	....
Aug. 28	Fiegenbaum, E. W.	Jacksonville, Ill.	575
Sept. 8	Wright, J. B.	Lancaster, Mo.	200
Sept. 22	Vaughan, V. C.	Newport, Ky.	450
Sept. 24	Vaughan, V. C.	Lafayette, Ind.	400
Sept. 30	Carrick, M. M.	Amarilla, Texas	....
Oct. 2	Bacon, S. S.	Elkhart, Ind.	....
Oct. 2	Porter, M. F.	Huntington, Ind.	500
Oct. 2	Sharp, H. C.	Shoals, Ind.	225
Oct. 2	Simonds, J. P.	Logansport, Ind.	*675
Oct. 4	Dodson, J. M.	East Chicago, Ind.	160
Oct. 7	Vaughan, V. C.	St. Paul.	50
Oct. 8	Cannon, W. B.	Rutland, Vt.	150
Oct. 8	Litchfield, L.	Pittsburgh	150
Oct. 8	Vaughan, V. C.	Oshkosh, Wis.	300
Oct. 13	Babcock, R. H.	Polo, Ill.	375
Oct. 13	Carrick, M. M.	Texarkana, Texas	500
Oct. 22	Newton, R. C.	New Brunswick, N. J.	....
Oct. 28	McBrayer, L. B.	Jackson, Miss.	175
Nov. 8	Littig, L. W.	Des Moires, Iowa	19
Nov. 19	Harrington, T. F.	Northampton, Mass.	150
Nov. 19	Hornsby, J. A.	Chicago	125
Nov. 20	Rodman, W. L.	Sanford, N. C.	1,000
Nov. 24	Bangs, C. H.	Fall River, Mass.	70
Nov. 27	Hoxie, G. H.	Warrensburgh, Mo.	750
Nov. 29	Dodson, J. M.	Winona, Minn.	125
Dec. 2	Towne, S. R.	Emmetsburg, Iowa.	110
Dec. 4	Littig, L. W.	Manchester, Iowa.	175
Dec. 4	Simonds, J. P.	Murphysboro, Ill.	250
Dec. 6	Miller, F. H.	Everton, Mo.	150
Dec. 8	Bullock, E. S.	Silver City, N. M.	150
Dec. 8	Rodman, W. L.	Goldsboro, N. C.	1,200
Dec. 8	Young, A. D.	Altus, Okla.	115
Dec. 11	Sumner, G. H.	Tullahoma, Tenn.	200
Dec. 11	Vaughan, V. C.	St. Louis	*600
Dec. 12	Rindlaub, J. H.	Mott, N. D.	200
Dec. 13	Sampson, F. E.	Creston, Iowa.	670
Dec. 15	Rosser, C. M.	Athens, Texas.	....
Dec. 15	Vaughan, V. C.	Columbus, Ohio.	150
Dec. 17	Churchill, F. S.	Chicago	70
Dec. 17	Litchfield, L. W.	Pittsburgh	125
Dec. 17	Schoor, W. F.	Concordia, Kan.	100
Dec. 18	Rosser, C. M.	Anson, Texas.	300
Dec. 19	Folkes, H. M.	Meadville, Miss.	28
Dec. 22	Moore, J. T.	LaGrange, Texas	....
Dec. 29	Parsons, J. G.	Ellsworth, Minn.	225
1915			
Jan. 4	Banister, J. M.	Omaha	110
Jan. 4	Simonds, J. P.	Minonk, Ill.	250
Jan. 9	Kerr, R. B.	New Market, N. H.	125
Jan. 11	Johnston, C. H.	Greenville, Mich.	300
Jan. 11	Kane, E.	Jackson, Tenn.	75
Jan. 12	Young, A. D.	Elk City, Okla.	200
Jan. 13	Arnold, H. D.	Concord, N. H.	....
Jan. 14	Paddock, C. E.	Chicago	70
Jan. 14	Simonds, J. P.	Elgin, Ill.	35
Jan. 15	Bullitt, J. M.	Princeton, N. C.	85
Jan. 15	Cook, C. H.	Templeton, Mass.	50
Jan. 15	McLester, J. S.	Mobile, Ala.	175
Jan. 15	Montgomery, E. E.	Greenville, Pa.	150
Jan. 16	Montgomery, E. E.	Washington, Pa.	150
Jan. 16	Vinton, M. M.	Millersville, Pa.	250
Jan. 19	Hurty, J. N.	Normal, Ill.	375
Jan. 20	Hurty, J. N.	Normal, Ill.	625
Jan. 21	Ravenel, M. P.	Manchester, Iowa.	1,400
Jan. 22	Arms, B. L.	Belton, Texas.	500
Jan. 25	Bracken, H. M.	Oskis, Minn.	150
Jan. 26	Sumner, G. H.	Audubon, Iowa.	275
Jan. 27	Emerson, C. P.	North Vernon, Ind.	....
Jan. 28	Hill, H. W.	Thief River Falls, Minn.	500
Jan. 28	Parkinson, J. H.	Woodland, Calif.	60
Jan. 28	Ravenel, M. P.	Moberly, Mo.	150
Jan. 29	Lamont, J. G.	Cooperstown, N. D.	250
Feb. 2	Maxey, E. E.	Ontario, Ore.	200
Feb. 4	Cramp, A. J.	DeKalb, Ill.	75
Feb. 5	Harris, S.	Greenville, Ala.	300
Feb. 5	Miles, G. W.	Binghamton, N. Y.	72
Feb. 5	Pearse, H. E.	Greenfield, Mo.	325
Feb. 5	Risser, A. S.	Cordell, Okla.	300
Feb. 9	Rodman, W. L.	Baltimore	950
Feb. 9	Wood, N. P.	Odessa, Mo.	150
Feb. 10	Bangs, C. H.	Lynn, Mass.	300
Feb. 10	Cramp, A. J.	Baltimore	550

TABLE 1—*Continued*

1914	Speaker	Place	Attendance
Feb. 10	Emerson, C. P.	Richmond, Ind.	150
Feb. 11	Guilford, F.	Chicago	51
Feb. 11	Swope, S. D.	Albuquerque, N. M.	200
Feb. 12	Goodwin, E. J.	Springfield, Mo.	150
Feb. 12	Lockwood, T. F.	Sarcoxie, Mo.	300
Feb. 13	McLester, J. S.	New Albany, Miss.	*125
Feb. 14	Dodson, J. M.	Champaign, Ill.	75
Feb. 23	Barker, L. F.	Frederick, Md.	500
Feb. 23	Linthicum, G. M.	Dover, Del.	275
Feb. 23	Montgomery, E. E.	Millville, N. J.	200
Feb. 24	Ives, G.	Harrisburg, Ill.	700
Feb. 25	Risser, A. S.	Perry, Okla.	550
March 1	Montgomery, E. E.	Danville, Pa.	65
March 4	Floyd, J. C. M.	Washington, Pa.	75
March 9	Harris, S.	Auburn, Ala.	675
March 10	Harris, S.	Auburn, Ala.	150
March 11	Harris, S.	Marion, Ala.	750
March 11	Harris, S.	Selma, Ala.	360
March 12	Banister, J. M.	Neligh, Neb.	110
March 12	Cramp, A. J.	Whitewater, Wis.	250
March 12	Harris, S.	Montevallo, Ala.	425
March 16	Linthicum, G. M.	Washington, Pa.	200
March 16	Simonds, J. M.	Freeport, Ill.	425
March 18	Hill, H. W.	Fergus Falls, Minn.	350
March 20	Grant, W. W.	Leadville, Colo.	300
March 21	Young, E. E.	Champaign, Ill.	100
March 22	Allport, F.	Joliet, Ill.	500
March 24	Simonds, J. P.	Lincoln, Ill.	250
March 27	Kane, E.	Tupelo, Miss.	50
March 28	Grant, W. W.	Del Norte, Colo.	110
March 28	Hurty, J. N.	Champaign, Ill.	107
April 1	Tuttle, T. D.	Port Angeles, Wash.	175
April 6	Carroll, A. H.	Millersville, Md.	50
April 7	Freeman, A. W.	Bluefield, W. Va.	700
April 8	Allport, F.	Galesburg, Ill.	225
April 9	Freeman, A. W.	Keyesville, Va.	150
April 9	Tinkham, H. C.	Whitefield, N. H.	335
April 9	Yarros, R.	Mt. Vernon, Iowa.	†1,400
April 10	Haynie, J. A.	Florence, S. C.	50
April 14	Litchfield, L.	Clearfield, Pa.	275
April 20	Coleman, T. D.	Thomaston, Ga.	....
April 20	Funkhouser, R. M.	Greenville, Ill.	175
April 22	Montgomery, E. E.	Pottstown, Pa.	500
April 22	Spaulding, E.	Greenville, N. H.	50
April 26	Montgomery, E. E.	Indiana, Pa.	275
May 4	Allport, F. A.	Grand Haven, Mich.	....
May 4	Bullitt, J. B.	Burlington, N. C.	....
May 5	Sumner, G. H.	Audubon, Iowa.	....
May 7	Witherspoon, T. C.	Stevensville, Mont.	....
May 12	Banister, J. M.	Bethany, Neb.	275

Number of meetings held, 151.
Expenses June 1, 1914, to June 1, 1915, $1,480.01.
Average expense per meeting, $9.80.

* Two meetings.
† Three meetings.

The following are some of the replies received in reply to a request for a statement of the definite results following these meetings:

1914

October 2.....Simonds, J. P.....Logansport, Ind.
Helped in securing better garbage disposal and better sewage.

November 19.....Hornsby, J. A.....Chicago.
Dispelled idea of the horrors of hospitals.

November 29.....Dodson, J. M.....Winona, Minn.
Helpful in securing school nurse.

December 2.....Towne, S. R.....Emmetsburg, Iowa.
The streets are being paved and the alleys cleaned.

December 11.....Vaughan, V. C.....St. Louis.
Stimulated higher ideals.

December 17.....Schoor, W. F.....Concordia, Kan.
Led to examination of eyes on the part of one.

1915

January 4.....Banister, J. M.....Omaha.
Led to two other requests for this address.

January 15.....McLester, J. S.....Mobile, Ala.
Has practically brought school commissioners to the point of employing a school nurse.

January 22.....Arms, B. L.....Belton, Texas.
A better babies' exhibit.

January 26.....Sumner, G. H.....Audubon, Iowa.
Social survey by Women's Club.

February 4.....Cramp, A. J.....Dekalb, Ill.
One druggist discontinued selling the fake cures mentioned by Dr. Cramp.

February 5.....Pearse, H. E.....Greenville, Mo.
Antifly campaign—City Sanitation Committee.

February 5.....Risser, A. S.....Cordell, Okla.
Teachers have put some of the suggestions into practice.

February 12.....Lockwood, T. F.....Sarcoxie, Mo.
Helped in local campaign for better sanitation.

1915

February 13.....McLester, J. S.....New Albany, Miss.
An increased interest in medical inspection of schools. The Teachers' Association voted afterward to raise $500 to get two sanitarians from the State Board of Health in this county, and a committee is consulting the local physicians *re* Medical Inspection of Schools.

February 23.....Linthicum, G. M.....Dover, Del.
Has had some influence in cleaning up the town.

February 24.....Ives, G.....Harrisburg, Ill.
Household science clubs are studying home sanitation, emergencies, water supply, etc.

March 11.....Harris, S.....Marion, Ala.
Health campaign.

March 22.....Allport, F.....Joliet, Ill.
Aided in adoption by School Board of Medical Inspection in Joliet public schools.

March 24.....Simonds, J. P.....Lincoln, Ill.
This talk may have been one of the "last straws" because, since then a much-needed sewer has been decided on and certain steps toward sewage disposal definitely begun.

April 1.....Tuttle, T. D.....Port Angeles, Wash.
Stirred up interest in making a clean town.

April 8.....Allport, F.....Galena, Ill.
Possibly the school board may put in medical inspection of schools.

TABLE 2.—REQUESTS FOR SPEAKERS AFTER FUNDS WERE EXHAUSTED

	Town	Speaker Asked For
ALABAMA:		
	Mobile	Harris, S.
	Pine Hill	Harper, W. W.
CALIFORNIA:		
	Ukiah	Hoag, E. B.
FLORIDA:		
	Bartow	Byrd, H.
	Clearwater	Arms, B. L.
ILLINOIS:		
	Carthage	Favill, H. B.
	DeLand	Cramp, A. J.
	Kewanee	Dodson, F. M.
	Tuscola	Allport, F.
	Villa Grove	Yarros, R.
	Yorkville.	
INDIANA:		
	Huntington.	
	LaPorte.	
IOWA:		
	Charles City	Sherbon, F. B.
	Clarence	Sumner, G. H.
	Clinton	Sherbon, F. B.
	Creston	Ravenel, M. P.
	New Hampton	Ravenel, M. P.
	Perry	Sumner, G. H.
	Sioux City	Sherbon, F. E.
KANSAS:		
	Chanute	Axtell, J. T.
	Meade	Schoor, W. F.
	Phillipsburg	Grant, W. W.
KENTUCKY:		
	Cloverport	King, W. F.
LOUISIANA:		
	Ruston.	
MAINE:		
	Bangor.	
MARYLAND:		
	Lonaconing.	
MICHIGAN:		
	Marquette.	
	Three Rivers.	
MINNESOTA:		
	Mankato	Hill, H. W.
	New Ulm	Hill, H. W.
MISSISSIPPI:		
	Sardis	Kane, E.
	Vicksburg.	
MISSOURI:		
	Aurora	Hoxie, G. H.
	Bethany	Morton, D.
	Charleston	Ravenel, M. P.
NORTH CAROLINA:		
	Winston-Salem	Harris, S.
OHIO:		
	Jeffersonville	Sampson, F. F.
	Newcomerstown	McCampbell, E. F.
	Sandusky	McClellan, B. R.
	Springfield	Hurty, J. N.
OKLAHOMA:		
	Mangum	Risser, A. S.
	Watonga	Young, A. D.
SOUTH DAKOTA:		
	Mitchell	Hill, H. W.
TENNESSEE:		
	Milan	Kane, E. C.
TEXAS:		
	Bowie	Carrick, M. M.
	Lampasas	McReynolds, J. O.
VERMONT:		
	St. Johnsbury.	
WASHINGTON:		
	Sultan	Kelly, E. R.

Bureau of Literature.—A large amount of attention has been given during the last year to the preparation of suitable literature for distribution to the public. The Public Health series outlined in last year's report has been developed, the following pamphlets having been prepared and printed: "Tuberculosis," by Dr. Edward R. Baldwin; "Smallpox and Vaccination," by Dr. Jay F. Schamberg; "Typhoid Fever," by Prof. E. O. Jordan; "The House-Fly," by Dr. L. O. Howard; "Hookworm," by Dr. John A. Ferrell; "Pure Water," by Prof. George C. Whipple; "Measles," by Dr. H. W. Hill; "Baby Welfare," by Dr. J. H. M. Knox; "Scarlet Fever," by Dr. Ludvig Hektoen. Pamphlets on diphtheria, malaria and medical school supervision are in preparation. These pamphlets have been printed in an advance edition, copies sent to the secretaries of the various state boards of health for criticism, and special editions printed for the different state boards to order. During the coming year, these pamphlets will be rewritten condensed as to bulk and prepared in a manner attractive to the lay reader. Other pamphlets of the same series will probably be prepared.

The pamphlets on special subjects, namely, conservation of vision, cancer, sex hygiene, medicolegal, defense of medical research, etc., have been published and distributed during the year. Table 3 shows the number and character of pamphlets printed and distributed since June 1, 1914.

TABLE 3.—NUMBER AND CHARACTER OF PAMPHLETS PRINTED AND DISTRIBUTED JUNE 1, 1914, TO MAY 15, 1915

Defense of Research, Pamphlet XXVII. "Animal Experimentation in the Diagnosis, Treatment and Prevention of Diseases of Children"	1,000
Conservation of Vision, Pamphlet I. "Schoolchildren's Eyes"	1,000
Conservation of Vision, Pamphlet II. "Industrial and Household Accidents to the Eye"	1,000
Conservation of Vision, Pamphlet IV. "The Relation of Illumination to Visual Efficiency."	1,000
Conservation of Vision, Pamphlet V. "Trachoma in Eastern Kentucky"	1,000
Conservation of Vision, Pamphlet VI. "Auto-Intoxication and the Eye"	1,000
Conservation of Vision, Pamphlet VII. "Eyestrain."	500
Conservation of Vision, Pamphlet VIII. "Lenses and Refraction"	1,000
Conservation of Vision, Pamphlet IX. "The Eye and Its Functions"	1,000
Conservation of Vision, Pamphlet X. "Care of the Eyes"	1,000
Conservation of Vision, Pamphlet XI. "Infant Blindness or Ophthalmia Neonatorum"	1,000
Conservation of Vision, Pamphlet XII. "Ordinary Eye Diseases"	500
Conservation of Vision, Pamphlet XIII. "Usual and Unusual Eye Accidents"	1,000
Conservation of Vision, Pamphlet XIV. "The Eyes of Transportation Employees"	500
Conservation of Vision, Pamphlet XV. "Ocular Hygiene in Schools"	1,000
Conservation of Vision, Pamphlet XVI. "Whisky, Tobacco and Drugs and the Eye"	1,500
Conservation of Vision, Pamphlet XVII. "The Oculist and the Optician"	1,000
Conservation of Vision, Pamphlet XVIII. "Preparation for Blindness"	1,000
Conservation of Vision, Pamphlet XX. "Blindness from Wood Alcohol"	1,500
"Plan of Campaign"	300
"Announcement for Speakers' Bureau"	20,000
"Speakers' Handbook"	500
"Control of Cancer"	3,000
"What Everyone Should Know about Cancer"	4,000
"Cancer of the Skin"	2,000
"Cancer of the Womb"	2,000
"Cancer of the Genito-Urinary Organs"	2,000
"Cancer of the Breast"	1,000
"Baby Welfare"	3,300
"Hookworm"	5,300
"House Fly"	6,300
"Measles"	100
"Pure Water"	1,100
"Scarlet Fever"	100
"Small-Pox"	10,300
"Tuberculosis"	4,300
"Typhoid Fever"	3,300
"Minimum Sanitary Requirements for Rural Schools"	55,000
"Save the Babies"	119,000
"Life's Problems"	1,000
"Catalog of Cartoons"	1,000
"Text of Proposed Bills for Conference"	500
"Regulation of the Practice of Medicine"	1,000
"Report of the Council on Health and Public Instruction for 1914"	500
"Why Should Births and Deaths Be Registered?"	16,000
"Cooperation and Coordination of Voluntary Public Health Organizations"	1,000
"Modern Medicine and Its Social Responsibilities"	1,000
"Medical Inspection of Schools"	1,000
"Sterilization of Criminals"	1,000
Total	285,400

Several items in this list deserve special mention. The Council has printed and furnished for different departments of the federal government during the past year the following pamphlets: 10,000 "Save the Babies" pamphlets for the federal Bureau of Education; 16,000 pamphlets, "Why Should Births and Deaths Be Registered," for the federal Bureau of the Census; 40,000 pamphlets, "Minimum Sanitary Requirements for Rural Schools," for the federal Bureau of Education.

The pamphlet on registration of births and deaths has been in print for a number of years. It is a development, containing material on this subject which has gradually accumulated; also the text of the model bill for the registration of births and deaths which the Council and, before its establishment, the Committee on Medical Legislation, has been instrumental in having passed in many states. At the request of Hon. W. J. Harris, Commissioner of the Census, 16,000 copies of this pamphlet were sent him for distribution in states in which this bill had been introduced.

The pamphlet entitled "Save the Babies," written by Dr. L. Emmett Holt of New York and Henry L. B. Shaw of Albany, is a twenty-page pamphlet containing in concise, popular and attractive form instructions to the mother as to preparations for motherhood, care of the unborn babe, advice to nurses and mothers, directions for artificial feeding, etc. This pamphlet has been widely distributed by the Committee on Women's and Children's Welfare, and at the request of the federal Commissioner of Education, Hon. P. P. Claxton, 10,000 copies were sent him for distribution through the Bureau of Education.

The widespread and general distribution of this pamphlet would be of the greatest value to the public. Unfortunately, the means of the Association are limited, and the few thousand copies which we can print and distribute are far too few to make any impression. We must therefore look to other interests to furnish the means for distribution in such quantities as are needed. Plans are now on foot for the printing and distributing of a large number of copies of this pamphlet, probably amounting during the next year to several hundred thousand copies through the cooperation of a manufacturing house interested in promoting child welfare in connection with its products. An initial order for 100,000 copies to be paid for and distributed by the manufacturing firm interested has recently been received. The possibilities of such cooperation are almost unlimited and as yet entirely undeveloped. Business organizations would naturally prefer to secure their literature through a responsible body like the American Medical Association, rather than to prepare their own material or to have it prepared for them by individuals. The commercial value of the public health propaganda is daily becoming more apparent. Material suitable for public education, properly edited and authoritatively vouched for, can be prepared by the Council better than by any other body. There is no reason why the expense of furnishing this material to the public should be borne by the organization or by the profession. The work is for the public good, and the general public should pay the bills. In this as in other fields of the Council's work, every effort should be made to place the work of the Council as far as possible on a self-supporting basis and to use the funds which the Board of Trustees appropriated for the Council work for development rather than for the distribution of material.

The preparation of a large edition of the pamphlet on "Minimum Sanitary Requirements for Rural Schools" will be discussed under the activities of the Committee on Cooperation with the National Educational Association.

Legislation.—The third principal function of the Council, that of formulating suitable legislation for the advancement of the public health interests, naturally divides itself into three heads:

1. Medicolegal Bureau. During the past year, the book on "The Digest of Supreme Court Decisions on Medical Practice Acts" has been completed and printed. The material in the Medicolegal Bureau has been classified and indexed and largely added to. A digest of Supreme Court decisions on powers and duties of state boards of health is now being prepared similar to the digest of Supreme Court decisions on medical practice acts. We now have listed 752 court decisions on this subject, 396 of which have been abstracted and indexed.

The collection of public health laws is practically complete to date. The general files of the bureau on public health matters, that is, the material in pamphlet form or the like, has been materially enlarged by clippings and pamphlets from the many health publications which come to the Association.

During the current year sixty-one inquiries on Medicolegal subjects have been received and answered. These inquiries may be grouped as follows:

Eighteen inquiries have come in as to the construction of various health laws, such as the laws touching on ophthalmia neonatorum, the English medical practice act, the educational requirements in the medical practice acts in the several states, as to the coroner under the Alaska law, the interpretation of the Missouri optometry law, of the workmen's compensation acts generally, as to the Kansas and Minnesota osteopathy laws and as to several of the habit forming drug laws and the like.

Fifteen inquiries for material to assist in drafting bills for introduction in the legislature.

Four requests for material to assist in drafting municipal ordinances.

Four inquiries as to the status of legislation on specific subjects, such as whether a nurse is permitted to use anesthetics, what states require the examination of the eyes, ears, nose and throats of schoolchildren, the consensus of opinion on marriage and sterilization legislation.

Five requests for a brief of court decisions on specific subjects. One on the liability of a physician for malpractice burns, others being on the enforcement of the sterilization laws, the liability of chiropractors under the medical practice acts if unlicensed and the like.

Five requests for opinions as to the liability of physicians in alleged cases of malpractice, such as whether or not a surgeon is liable for the negligence of his assistants, as to whether a hospital is liable for a typhoid fever patient who jumps from a window, and generally as to the liability of physicians for treatment rendered.

Two requests for opinions as to the right of a physician to recover for services rendered.

Four requests for opinions as to physician's rights when acting as witnesses, that is, as to when he may decline to testify on the ground that his information is privileged and as to whether he may demand fees for his services as an expert.

Four inquiries as to the general reputation, moral, economic or otherwise, of specific institutions or persons.

Because of the completeness of our files as to the public health laws and the cases thereunder, as well as the general material of a public health nature, the bureau is amply fitted to answer inquiries of this nature. Briefs and opinions may be readily gotten out, as well as resumés of the legislation on any specific subject.

Large amounts of material of all kinds, including pamphlets, reprints, newspaper and magazine articles and clippings, Supreme Court decisions, briefs, etc., have been received and filed. The bureau has a rapidly increasing amount of material on all subjects relating to the legal side of medicine.

One of the most important activities of many of our state organizations is the defense of its members from malpractice suits. Twenty-three out of the forty-eight state associations have now provided for such defense. The law of professional malpractice is not statutory law, but is to be found in court decisions or, as it is called in legal circles, case law. A lawyer in order to become proficient in this subject must devote a large amount of time and energy to the study of decisions of courts of last resort. The fact that the average lawyer is not proficient on this subject accounts for the fact that many cases have been decided not according to the merits of the case but according to the qualifications or lack of qualifications of the council.

The principal advantage to be gained by the system of medical defense inaugurated by the different state associations is that it enables the state society to place in the hands of one attorney or firm of attorneys in the state practically all of the malpractice business of the state, thus enabling the attorneys chosen for this work to become expert on this subject. This means that each state association which has already adopted this plan and those which may in the future do so will find it necessary to have collected either by the committee of the state society or the attorneys for the state society, all of the Supreme Court decisions bearing on this subject. There is no reason why this work should be thus duplicated in each state. At a comparatively slight expense, with the facilities which we now have, it would be possible to collect in the Medicolegal Bureau at the headquarters of the Association all of the Supreme Court decisions which have been rendered on this subject, to have them properly classified and indexed and to keep them up to date by the addition from time to time of the occasional new decisions on this subject, thus forming a central bureau of reference from which any of the committees on medical defense could secure information, references and assistance in preparing briefs. This is essentially a work which should be done by the national organization and in which the Council through its Medicolegal Bureau can cooperate effectively with the medical defense committee in each state which has adopted this plan. The Council urges that this suggestion be given careful consideration and that as soon as it is possible for the necessary appropriation to be made by the Board of Trustees, this work be added to the functions of the Medicolegal Bureau.

Midwinter Conference.—The usual Midwinter Conference was held in Chicago on Monday, February 15. Four subjects for discussion were presented, two of them being incidental and two being fundamental. The incidental subjects were medical expert testimony, covered by the report of the special committee on this subject appointed two years ago, and the prevention of ophthalmia neonatorum. The two fundamental subjects were the state regulation of the practice of medicine and state public health organization. The Committee on Medical Expert Testimony presented its report in the form of a model bill which has been approved by the American Institute of Criminal Law and Criminology and which was drafted by a committee of that organization which included two members of the special committee appointed by the Council. This committee has since been brought into close cooperation with a similar committee on expert testimony appointed by the American Association for the Advancement of Science, and there is every indication that during the coming year a definite plan for the better regulation of expert testimony will be involved. The bill presented by the committee, which covered only a limited phase of this question, was endorsed by the conference.

The afternoon session of the conference was given entirely to the discussion of state regulation of public health and state regulation of the practice of medicine. Tentative drafts of bills were presented as a basis for discussion. The views expressed show clearly that much study and discussion are necessary before anything definite can be developed in the way of model legislation on either of these subjects. The report of Dr. Chapin with its tendency to standardize state public health work will be of great assistance in crystallizing views on state health organization. It is the intention at present to devote the midwinter conference in February, 1916, entirely to the discussion of these two fundamental questions.

The plan for the development of model laws on fundamental subjects has progressed considerably during the past year. To the model law on vital statistics now recognized as a standard throughout the country can now be added the bills on medical expert testimony and the prevention of blindness endorsed at the last conference, while the bills drafted on state regulation of the practice of medicine and state regulation of public health will serve for the concentration of discussion until something more definite can be worked out.

Federal Legislation. — The most important legislation directly affecting the medical profession, enacted during the past year, is the last one of the series of federal antinarcotic laws, commonly referred to as the Harrison act.* This act, it will be remembered, requires every physician who in his practice uses morphin, cocain, and certain other drugs to register with a collector of internal revenue, paying an annual tax of one dollar, and to keep certain records to show the quantity and quality of all such drugs received and, with certain limitations, to show how he disposes of them.

The enactment of this legislation was imperatively demanded by international obligations that this government had assumed with a view to the limitation, and ultimately, so far as may be practicable, the elimination, of drug habits as one of the factors of ill health, inefficiency, and unhappiness. Recognizing the necessity for this legislation, the Council endeavored to have it framed in such a way as to impose on the medical profession the least possible burden compatible with the accomplishment of the ends for which it was designed. As is usually the case, there were many conflicting interests at work shaping it, and in the end the act took a form representing, it is believed, an extremely fair compromise.

The efforts that have been made to enforce this act have led in some cases to misunderstandings on the part of physicians not fully acquainted with its scope and purposes, which were not decreased or mitigated by the fact that some collectors of internal revenue have apparently misunderstood their functions in the matter and have seemingly acted more or less independently of the office of the commissioner of internal revenue at Washington. Some of the rulings of the commissioner's office have, too, it much be admitted, not been such as tend to lighten the burden the medical profession so willingly assumed. Such conditions are almost inevitable under the early administration of legislation so radical and novel as this, and the Council urges the utmost patience on the part of the medical profession with respect to the situation. Certain necessary burdens must be borne in this connection by physicians, for the public good; and these the profession may be confidently relied on to bear without complaint. The unnecessary burdens—those that the profession may justly complain of—time may be expected to cure, and only after it has failed to do so should thought be given to recourse to the courts and to Congress for relief.

SUBCOMMITTEES

Some of the most effective work of the Council is now being carried on through subcommittees. In addition to the reports of these committees submitted as a supplement to this report, some comments are advisable on special features of the committee's work.

Committee on Women's and Children's Welfare.—At the fall meeting of the Council, held October, 1914, the name of the Committee on Public Health Education Among Women was changed to the Committee on Women's and Children's Welfare. This was considered advisable on account of the increasing concentration of the committee on this field and the fact that the old title led to more or less misunderstanding regarding the scope of the committee's work. It is a pleasure to commend the work of this committee under the chairmanship of Dr. Lenna L. Meanes of Des Moines, Iowa. One of the most valuable of its accomplishments during the last year has been the securing of the pamphlet on infant welfare written by Drs. Holt and Shaw, which, it is hoped, will be given wide distribution during the coming year.

The Committee on Conservation of Vision.—This committee has carried on its program of popular instruction largely through pamphlets and lectures. The report of the committee will present this work in detail.

The Committee on Cancer.—This committee has been instrumental in the preparation and publication of a series

* An Act to provide for the registration of, with collectors of internal revenue, and to impose a special tax upon all persons who produce, import, manufacture, compound, deal in, dispense, sell, distribute or give away opium or coca leaves, their salts, derivatives or preparations, and for other purposes.

of pamphlets on this subject. Other pamphlets are in process of preparation. The committee has also been of great value in coordinating the work of the Council with that of the Cancer Committee of the Clinical Congress of Surgeons of North America and the American Society for the Control of Cancer.

The Committee on Cooperation with the National Educational Association.—This committee has developed into an important factor in the Council's work. Appointed originally in response to a general movement for closer cooperation between the organized medical profession and the organized teaching profession of the country, its function was at first somewhat vague. As a result of the meeting of the committee held in Chicago in July, 1912, and of subsequent conferences, it was decided that the first subject for this committee to take up was the sanitary condition of rural schools and the health of rural schoolchildren, the committee feeling that this part of the field had been neglected, more attention having been paid to school conditions in the cities than in the country. It was soon found, however, that no amount of information was in existence regarding rural school conditions. Fortunately, the federal Bureau of Education authorized a fairly comprehensive study of rural school conditions in different parts of the country by Prof. F. B. Dresslar of Peabody University, Nashville, Tenn., a special representative of the federal Bureau of Education, who prepared a report on rural school conditions, which was printed and distributed by the federal Bureau of Education. This report, however, was too bulky and expensive for widespread distribution. It was accordingly used by the committee as a basis for the preparation of a small eight-page pamphlet entitled "Minimum Sanitary Requirements for Rural Schools," embracing all of the essentials found in Professor Dresslar's report and giving in concise simple form the minimum sanitary requirements which should be tolerated in any rural school. This pamphlet was printed by the Association and distributed at the 1914 meeting of the National Educational Association. Its value was at once recognized, and increasing calls for it began to come in from all parts of the country to such an extent that neither the Council nor the joint committee was able to supply the demand. An edition of 50,000 copies was printed, 40,000 of which were sent to Hon. P. P. Claxton, the federal Commissioner of Education, for distribution through his bureau, and 10,000 to Dr. Wood, the chairman of the joint committee. The 40,000 pamphlets were sent to Dr. Claxton in January, and early in March he reported that his supply was entirely exhausted and that he had already received requests for over 12,000 copies in addition. The funds of the committee and of the Council available for this purpose having been already exhausted, it was not possible to furnish any more copies of these pamphlets at that time. However, at the winter meeting of the National Council of the National Educational Association, held in Cincinnati, February 23, a joint conference of the officers of the National Educational Association, the members of the joint committee and the chairman and secretary of the Council was held at which the principal question discussed was the possibility of securing a large edition of this pamphlet for widespread distribution. Commissioner Claxton on being asked how many copies he wanted, replied that he could use 750,000 copies, sending them to rural schoolteachers, members of country school boards, etc. It was estimated that this quantity printed at the lowest possible cost by the Association Press would involve an expense of approximately $3,000. As the funds of the Council had all been appropriated for the year and as the appropriation of the National Educational Association was decidedly limited, it was necessary to look elsewhere for means to distribute this pamphlet. Fortunately the interest of the Elizabeth McCormick Memorial Fund of Chicago was attracted, and the proposition of financing the publication of an edition of three-fourths of a million copies of this pamphlet for Commissioner Claxton's use was placed before the Trustees of the Fund at their meeting in Chicago on May 10. It is a gratifying evidence of the increasing tendency toward cooperation in public health work that the funds necessary for printing 750,000 copies of this pamphlet for the Federal Bureau of Education were unanimously voted and the work is now under way. The wholesale distribution of this pamphlet to those interested and responsible for rural school conditions marks the completion of the first task undertaken by the joint committee representing the American Medical Association and the National Educational Association.

Uniform Regulation of Membership.—This committee has not held a meeting during the year, considering it advisable to give the state associations ample time in which to consider and adopt the recommendations of the State Secretaries' Conference held in Chicago, Oct. 23, 1912.

The Committee on Medical Expert Testimony.—At the midwinter conference, this committee presented a report in the form of a model bill on a single phase of the medical expert testimony problem. Further work by the committee will be conducted during the year.

SPECIAL ACTIVITIES

Public Health Sunday.—Following the custom established at Minneapolis and St. Paul in 1913, and in Philadelphia in 1914, the secretary of the Council, with the cooperation of the local committee, took up the work of furnishing each church in San Francisco, which so desired, a speaker on a public health topic for Sunday, June 20. In this work, we are following the same plan as in previous years, and the indications are at the time this report is drafted that Public Health Sunday in San Francisco will be as successful as Public Health Sunday in the other cities.

OFFICE WORK

During the past year, the secretary has received 5,943 letters and has written 6,247. Requests for information from the following sources have been received and answered:

Attorneys	5
Boards of Education	6
Boards of Health	65
Boards of Medical Examiners	1
Clubs	8
Federal Departments	13
Hospitals	16
Legislative Reference Bureaus	1
Libraries	31
Medical Societies	19
Ministers	9
Nurses	3
Physicians	587
Publications	15
Public Health Associations	2
Railroads	14
State Senators	1
Universities, Colleges, High Schools, etc.	74
Y. M. C. Associations	3
Miscellaneous	338
Total	1,211

CONCLUSIONS

It has become increasingly evident as the work of the Council develops, that the chairman was eminently correct in the statement which he made during the first year of the Council's activity, that its greatest usefulness would be found to lie in acting as a center around which other organizations and activities could group rather than in the independent work which it might itself accomplish. This fact is each year becoming more apparent. Probably the most valuable work which the Council has done is that of coordinating and harmonizing different groups of organizations and bringing into close relations and conditions of mutual understanding the American Medical Association and organizations in other fields. The list of organizations and bodies with which we are now in close cooperation and growing accord is constantly increasing. It includes such organizations as the General Federation of

Women's Clubs, the National Educational Association, the various departments and bureaus of the federal government, most of the state boards of health, many special organizations such as the American Public Health Association, the Conference of State and Provincial Boards of Health, the Conference of State Medical Examining Boards, the American Society for the Control of Cancer, the American Posture League, the National Association for the Study and Prevention of Tuberculosis, the American Association for the Advancement of Science and many others, as well as press associations, newspaper publishers, business men's organizations and many other similar bodies throughout the country. The effect of this work on the standing and influence of the Association and the profession can hardly be overestimated. The Council has endeavored in all of its work to observe the great principle that the highest function which any individual or organization can perform is that of service, and that in developing our influence, we must ever keep in mind the scriptural injunction, "A man who would have friends must show himself friendly." It is of little value for us to parade our good will to the public unless we manifest it by actual deeds and by a friendly spirit.

Respectfully submitted.

HENRY B. FAVILL, *Chairman,*
HENRY M. BRACKEN,
WATSON S. RANKIN,
WALTER B. CANNON,
WILLIAM C. WOODWARD,
FREDERICK R. GREEN, *Secretary.*

REPORTS OF SUBCOMMITTEES OF THE COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

COMMITTEE ON WOMEN'S AND CHILDREN'S WELFARE

To the Council on Health and Public Instruction:

At the November meeting of the Council on Public Health and Instruction, the name of our committee was changed from "Public Health Among Women" to "Women's and Children's Welfare Committee," thus broadening very materially the scope of our work. We trust that the history of the past year will in a measure justify the encouragement thus given us. It has been the policy of our committee during the past two years to organize and develop to the extent of our ability one line of action rather than to dissipate our efforts by numerous lines; also to keep that line well within the function of our committee, although encouraging individual members to work along any legitimate line of public health.

In the first year of my chairmanship the committee gave its efforts almost entirely to formulating the plans for carrying on the work of measuring and scoring babies. At the time of the last annual report the A. M. A. score card, which was prepared by our subcommittee with Dr. Henry L. K. Shaw as chairman, had just reached us. With this in our hands we were in a position to begin our work for this second year.

From the beginning, our committee has emphasized the measuring and scoring of babies rather as a basis for the development of the frail child, than for the detrmination of the score of the already healthy strong child. In our report of last year we find the following statement: "Our ultimate hope in connection with the conferences is that it will pave the way for creating permanent stations where babies can be examined from time to time. If this hope is realized we feel that the baby health movement will be placed on such a solidly scientific basis that the present marvelous interest will continue permanently." That this hope is being realized is proved by the fact that in very nearly every instance in which communities have held contests, conferences have followed, while in many places the conferences have begun the work and developed into permanent welfare stations or improvement clubs. Perhaps the most active factors in this development have been the extension departments of colleges, milk stations, state and county fairs, farmers' institutes, women's clubs, summer chautauquas and state boards of health. The state fairs have been most persistent, perhaps, in their encouragement of conferences. One state, Iowa, has even gone so far as to revise its classification list completely, changing the name of the department from "Baby Health Contest" to "Babies' Health Division." Throughout the classification the word "contest" is nowhere used, and an entirely new division has been added for improvement class, which table is given below.

BABIES' HEALTH DIVISION

DIVISION NO. 1 (BABIES FROM RURAL DISTRICTS)

Boy 12 months and under 24 months old.
Boy 24 months and under 36 months old.
Girl 12 months and under 24 months old.
Girl 24 months and under 36 months old.

DIVISION NO. 2 (BABIES FROM CITIES AND TOWNS LESS THAN 10,000)

Boy 12 months and under 24 months old.
Boy 24 months and under 36 months old.
Girl 12 months and under 24 months old.
Girl 24 months and under 36 months old.

DIVISION NO. 3 (BABIES FROM CITIES OVER 10,000)

Boy 12 months and under 24 months old.
Boy 24 months and under 36 months old.
Girl 12 months and under 24 months old.
Girl 24 months and under 36 months old.

CHAMPIONSHIPS (ONLY FIRST-PRIZE WINNERS IN PRECEDING SECTIONS ARE ELIGIBLE TO COMPETE FOR CHAMPIONSHIP HONORS)

Most perfect boy 12 to 36 months.
Most perfect girl 12 to 36 months.

Whenever we have been asked concerning the advisability of cash prizes or medals, we have invariably advised medals, the prize of course to be given for the greatest improvement. We quote from the same state fair classification list, to show how this idea is also gaining recognition:

DIVISION NO. 4 (BABIES WHO HAVE MADE THE BEST IMPROVEMENT SINCE LAST YEAR'S EXAMINATION)

(From Rural Districts)

Boy 24 months and under 36 months old.
Girl 24 months and under 36 months old.

(Babies from Cities and Towns Less Than 10,000)

Boy 24 months and under 36 months old.
Girl 24 months and under 36 months old.

(Babies from Cities and Towns over 10,000)

Boy 24 months and under 36 months old.
Girl 24 months and under 36 months old.

One phase of our work which we feel has materially aided in swinging the public from contests to conferences is that of having some well-known specialist present at these contests or conferences whose business it has been to give each mother a private consultation of from five to fifteen minutes. This one feature is invaluable, and has already had a marked influence toward steadying the movement.

This increasing steadiness of the work has been one of the most significant aspects of it to us. Much state legislation concerning establishment of permanent children's bureaus has gone on throughout the country, showing a desire to support the movement in a unified way. New York and Kansas have progressed to the extent of establishing child welfare divisions under the supervision of the State Board of Health, and other states are studying the possibilities of such departments. In New York the work has been put under the direct supervision of Dr. Lydia Allen De Vilbiss, who is given the title of Consulting Expert on Motherhood of the New York Department of Health. Dr. De Vilbiss has been most closely connected with the work of our committee throughout the history of the baby health movement.

It is also gratifying to know that the federal government through the Children's Bureau is in hearty sympathy with the work of our committee, and has cooperated with us throughout the year, referring inquiries to us for score cards and other literature concerning measuring and scoring of babies. In fact, the interest of the bureau has been so keen in the development of this work that Miss Julia Lathrop attended the conference held in the new building for women and children at the state fair, Des Moines, Iowa last September, in order to study in detail the methods used there for

conducting the conference. Dr. Frances Sage Bradley, who is conducting the children's conference of the federal bureau at the Panama Exposition, has most generously offered our committee their equipment for measuring and scoring babies according to the A. M. A. score card, for any time during the exposition.

As the movement has developed, the score card committee has been tireless in its efforts to simplify and make exact the original score card. Pamphlet No. 5 is now being revised, and an anthropometric table has been prepared for male and female children from 6 to 42 months old, based on the measurements of 3,448 normal babies in twenty-three states. This was compiled by Mr. F. S. Crum, assistant statistician, Prudential Insurance Company of America, Newark, N. J., and published by the Council on Health and Public Instruction of the A. M. A. for the Committee on Public Health Education among Women. At the end of this year it is the intention of this committee to submit to Mr. Crum the duplicate score cards of all contests and conferences, in order that he may secure and tabulate more scientific data.

As a summary and general survey of our work in the baby health movement of the past year, we submit the following report of material issued and a few letters, showing something of the variety and extent of the distribution.

LIST OF LITERATURE SENT OUT DURING THE PAST YEAR

Score cards	16,050
Duplicates	15,600
Anthropometric tables	541
Pamphlet No. 5	4,227
Pamphlet No. 6	2,325
Pamphlet No. 7	18,514
Book slips	8,500

"Jan. 9, 1914.

"To the Committee on Women's and Children's Welfare:—Kindly send twenty-five score cards used in the babies' contest, also information as to the contest methods used in conducting these contests.

"I am requesting this material for the introduction of American child welfare work in Italy.

"E. BURBY, New York."
"March 30, 1915.

"To the Committee on Women's and Children's Welfare:—The afternoon conferences are progressing very nicely. We have had from eight to twelve babies each time. We need more score cards as soon as possible. Could they be sent in larger quantities? Also the pamphlet 'Save the Babies'?

"MAUDE C. CLARK, President Child Welfare Association, Sioux City, Iowa." "Aug. 14, 1914.

"To the Committee on Women's and Children's Welfare:—For use in the conduct of the baby health conference to be held in Buffalo in the near future, preparations for which are being made, will you please forward to the undersigned the following: 1,000 score cards in duplicate; 25 Instructions to Examiners; 1,000 'Save the Babies' pamphlets.

"ARTHUR SCHAEFER, Assistant Health Commissioner and Chief of Bureau of Child Hygiene, Buffalo."
"April 6, 1915.

"To the Committee on Women's and Children's Welfare:—Will you send us 250 score cards; 10 Instructions to Examiners; 300 'Save the Babies,' by Dr. Holt, pamphlet, and any other material which you think will make our conference effective.

"We will hold contests at six places during the spring. We could hold them at many more but it does not seem advisable unless the work can be made effective by conferences and some follow-up work. We have calls all the while from mothers and social workers. We thank you for past help and that which you will send.

"It would do your heart good to see the earnest spirit which pervades these conferences. In a recent letter from B——, two babies are reported as sound and healthy who were pitiful specimens in October. One of them was the most emaciated baby I ever saw not to be acutely ill.

"MARY E. FRAYSER, Winthrop Normal and Industrial College, Rock Hill, S. C."

Dr. Jackson of Honolulu, H. I., writes:

"My occasion for writing now is that Mrs. James A. Ratt of the Palama Settlement here is laying plans to have a baby contest and health exhibit; will you please send me all your literature. . . . Such a contest here is calculated to do good, and we could have some very unique features, as we have every race under the sun here and could have sections according to races, etc. Literature in different languages could be well used here, especially in Japanese, Chinese, Russian, Spanish, Portuguese, Korean, as well as English."

In conclusion we quote from a letter received from Dr. Rosa Gantt of Spartanburg, South Carolina:

"I am very much pleased with the fact that our State Board of Health included in its budget $100 to meet the expense of holding another better baby conference during our next state fair. I believe that if we stick to infant welfare work for a while we can make better progress than in trying to do too much as I believe in concentration. Our conference here in Spartanburg was a wonderful success; the year previous sixty-five babies were examined, and this fall we had to extend the period two days and 145 babies were examined, and others had to be turned away for lack of time. Infant welfare work seems to have taken a great hold on all classes of people everywhere. I shall endeavor to interest club women throughout the South in holding exhibits in connection with or separate (as they see fit) from the baby conferences, and also try and interest the state medical associations of the South in giving aid to the clubs."

With contests giving way to conferences; with the gradual elimination of cash prizes; with the steady increase in the number of permanent stations, and with increased legislation establishing bureaus and child hygiene departments, we feel that the baby health movement is sufficiently developed to be taken care of with ease, and to pass into a minor work of the committee.

With this in mind, a course of study for use in women's clubs is being prepared by Dr. Crumbine, a member of our central committee who is also secretary of the State Board of Health of Kansas. We will present it at the open meeting of our committee, in San Francisco. We shall print and distribute this course as soon as it is ready and interest the women's clubs in its use, thus continuing to develop what we consider the most distinct function of our work—an intelligent cooperation between our committee and the women's clubs in the welfare of women and children.

In conclusion, we wish to say that our year's work has been made possible by the hearty cooperation of our Council and various subcommittees, and by the many individuals who have given us thorough and efficient support.

Respectfully submitted.

LENNA L. MEANES, Chairman.
MARTHA WELPTON, Secretary.

COMMITTEE ON CANCER

To the Council on Health and Public Instruction:

Your committee has devoted its energies chiefly to the publication of pamphlets dealing with the subject of cancer in general and with those bearing on the various forms of cancer.

The following pamphlets have been published:

Control of Cancer, Dr. Joseph C. Bloodgood.
What Every One Should Know About Cancer, Dr. Joseph C. Bloodgood.
Cancer of the Skin, Dr. Henry H. Hazen.
Cancer of the Breast, Dr. W. L. Rodman.
Cancer of the Womb, Dr. Franklin H. Martin.
Cancer of the Genito-Urinary Organs, Dr. Hugh H. Young.

Many inquiries have come to the committee from the laity asking for knowledge on cancer of certain organs, and the committee has promptly mailed to the inquirer the desired pamphlet through Dr. Frederick R. Green, secretary of the Council on Health and Public Instruction.

We find that the campaigns thus far waged have yielded excellent results as evidenced by the number of early cases of cancer presenting themselves for operation. This early recognition of cancer we have found due to two main factors:

1. The physicians of the United States now fully realize that many early cases of cancer can be cured.

2. The public has already become so alive to the subject that if cancer be suspected they at once seek medical aid.

Your committee, which is also the committee of the Clinical Congress of Surgeons, wishes to express once more its hearty appreciation of the splendid work being done by the American Society for the Control of Cancer. Its funds have been contributed chiefly by the laity, and we would strongly urge the members of the American Medical Association to advise their patients to become members of this association, which has been and is doing so much to disseminate useful knowledge concerning cancer and is pointing out what may be accomplished by early operation. The secretary of this committee is Mr. Curtis E. Lakeman, 289 Fourth Avenue, New York. The success of that society is due in large measure to the careful and conscientious work of Mr. Lakeman and to Mrs. Robert G. Mead, chairman of the Finance Committee, New York, who has been indefatigable in raising the necessary funds. The great interest taken by the laity in the subject of cancer is the most helpful sign that could be wished for.

Your committee would draw attention to the fact that the Council on Health and Public Instruction of the American Medical Association has encouraged the endeavors of the American Society for the Control of Cancer in every way, and further, that it has gladly published articles for this society.

Your committee is greatly pleased with the progress that has already been accomplished in the campaign of education on the subject of cancer and feels sure that within the next five years every person in the United States will fully realize that cancer, if taken in time, can in many instances be permanently cured. They will also be familiar with the various precancerous lesions which, if promptly treated, will yield practically 100 per cent. cure.

Respectfully submitted.

THOMAS S. CULLEN, Chairman.
HOWARD C. TAYLOR,
C. JEFF MILLER,
F. F. SIMPSON,
J. C. BLOODGOOD.

COMMITTEE ON EXPERT TESTIMONY

Your committee have had under discussion the advisability of drafting a bill for the regulation of expert testimony for the past three years. The bill which is now submitted is a joint product of committees appointed by the American Bar Association, the American Institute of Criminal Law and Criminology, and the American Medical Association. The personnel of these committees includes jurists and physicians. It has been the endeavor of the various committees to include in this bill certain general principles which may be modified to suit local conditions.

At first thought it may appear that this bill, limited as it is to expert testimony in criminal cases in which the plea of insanity is raised, is only a limited application of the scope of what such a reform should be. It leaves untouched the bulk of cases in which medical men testify. While this criticism is a valid one, it seemed to your committee a wise provision that the first step in the proposed changes should be short. If the provisions of this bill were made to apply to all cases, both civil and criminal, and then some of its clauses were found obnoxious to the constitution in a given state, it would complicate the record in a large number of cases and cause unnecessary hardship. It was also thought that narrowing the application of the bill would in part lessen the hesitation of the several legislatures in placing it on the statute books. The restriction to criminal cases brings under its provisions those cases that are most in the public eye and in which the defects in present methods are most glaring. If after its enactment it proves satisfactory, it can be extended from time to time to other classes of litigation.

Section 1. *Summoning of Witnesses by Court.*—Be it enacted by the people of the state represented in the general assembly, that whenever in the trial of a criminal case the issue of insanity on the part of the defendant is raised, the judge of the trial court may summon one or more disinterested, qualified experts, not exceeding three, to testify at the trial. In case the judge shall issue the summons before the trial is begun, he shall notify counsel for the prosecution and defense of the witnesses so summoned. Upon the trial of the case the witnesses summoned by the court may be cross-examined by counsel for the prosecution and defense. Such summoning of witnesses by the court shall not preclude the prosecution or defense from using other expert witnesses at the trial. The witnesses summoned by the judge shall be allowed such fees as in the discretion of the judge seem just and reasonable, having regard to the services performed by the witnesses. The fees so allowed shall be paid by the county where the indictment was found.

In effect this section creates two classes of experts, those summoned by the court and those which may be called by either the prosecution or defense. This provision is essential to make the bill constitutional, as no defendant can be prevented from introducing testimony which is competent to prove the issue in his case. It will be noted that this section is not mandatory; it is left wholly to the discretion of the court.

Sec. 2. *Examination of Accused by State's Witnesses.*—In criminal cases no testimony regarding the insanity of the defendant shall be received from witnesses summoned by the defendant until the expert witnesses summoned by the prosecution have been given an opportunity to examine the defendant.

This section would be constitutional in some states but doubtfully so in others.

Sec. 3. *Commitment to Hospital for Observation.*—If in a criminal case the issue is raised that the defendant is insane so that he ought not to be tried, the judge of the trial court shall commit the defendant to a state hospital for the insane, preferably the one nearest the place of trial, to be detained there for purposes of observation until further order of court, provided that the duration of such detention shall not exceed three months. The court shall direct the superintendent of the hospital to permit all the expert witnesses summoned in the case to have free access to the defendant for purposes of observation. The court may also direct the chief physician of the hospital to prepare a report regarding the mental condition of the defendant. This report may be read at the trial of the issue of insanity by the said chief physician after he has been properly sworn as a witness. After reading the report the witness may be cross-examined by counsel for the prosecution and defense.

This provision is already a part of the law in five states, where it has proven practical and useful. It is a simple provision by which the state can avail itself of machinery already in operation. If it shall appear to the judge that the accused is in such a mental condition that he ought not be tried, he can be sent to a state hospital and there remain under observation until his mental condition can be ascertained. This provision would enable the judges to exercise greater discrimination in administering the criminal law. If in doubt of the person's sanity or if the suspected feigning, all that is needed is a summary commitment to a state hospital for observation. This provision would lessen the number of insane and feeble-minded now in the state penitentiaries.

Sec. 4. *Written Report by Witnesses.*—When the issue of insanity has been raised in a criminal case each expert witness, who has examined or observed the defendant, may prepare a written report, based upon his examination or observation, regarding the mental condition of the defendant, and such report may be read by the witness at the trial. If the witness presenting the report was called by the prosecution or defense, he may be cross-examined regarding his report by counsel for the other party. If the witness was summoned by the court, he may be cross-examined regarding his report by counsel for the prosecution and defense.

If no other provision became part of the law than Sec. 4, it would be a distinct advance in the admission of expert testimony. It enables a physician testifying as an expert to bring into court a concise statement of his findings and the reasons for his conclusions. Under such a rule the half truths and defective presentations now introduced would be lessened. At least there could be no excuse for them on the part of the expert.

Sec. 5. *Joint Report by Witnesses.*—Wherever in a criminal case expert witnesses have examined or observed the defendant, on whose behalf the issue of insanity has been raised, they may consult before testifying, and may prepare a joint report regarding the mental condition of the defendant. This report may be read at the trial by one of the experts who joined in the report, after all the experts who joined in the report have been duly sworn as witnesses. All the experts who joined in the report shall be subject to cross-examination by counsel for the prosecution and defense.

This is an extension of the Leeds system. It, like the preceding section, is not mandatory, but it permits expert witnesses to consult and if they agree they may submit a joint report. Possibly it will be found that under this provision there will be less disagreement among experts than has heretofore been believed. Trials as at present conducted usually magnify differences, which in many instances are only verbal definitions.

An especial merit of the bill is that each of the sections are independent. One can hardly conceive of the entire bill being pronounced unconstitutional. Should it be placed on the statute book and one or more of its provisions become inoperative, there would still be some advance toward placing this subject on a higher forensic and scientific plane.

HAROLD N. MOYER, Chairman.
E. R. KEEDY,
GILBERT SEAMAN.

COMMITTEE ON COOPERATION WITH THE NATIONAL EDUCATIONAL ASSOCIATION

To the Council on Health and Public Instruction:

The investigation of rural schools made last year under the direction of the joint committees, show the need of better architectural and sanitary standards, better education in the principles and practice of school hygiene and sanitation, popular education from public press, and lectures on health topics. The committees had already secured the passage of a resolution at the meeting of the N. E. A. in 1913, asking that more information be obtained regarding the hygienic and sanitary conditions of the rural schools, and especially to ascertain what instruction is being given by schools upon the subjects of hygiene, sanitation and health sciences.

Neither chairman was able to attend the meeting of the N. E. A. in 1914, but the procuring of appropriations for carrying on this work was left with Professor Keyes, who succeeded in securing $500. The A. M. A. had already arranged to appropriate an amount equal to that appropriated by the N. E. A.

On Feb. 19, 1915, Doctors Favill, Dodson, Green and Corwin met at the University Club, Chicago, and arranged to meet at Cincinnati, Feb. 21, 1915, and to attend the session of the Department of Superintendents, N. E. A.

On the morning of Feb. 23, 1915, the committees had a joint session in Cincinnati. There were presen Drs. Favill, Green, Corwin and Wood, and Messrs. Claxton, Winship, Keating, Dresslar, Shawan and Keyes.

The principal subject for discussion at the joint meeting was the best method by which the large edition of the pamphlet on "Minimum Sanitary Requirements for Rural Schools" could be supplied to the United States Commissioner of Education for distribution to rural school teachers and school boards. Commissioner Claxton stated that he could use 750,000 copies of this pamphlet distributing them under government frank. Dr. Green estimated that this would involve an expense of approximately $3,000. It was recognized that this sum was beyond the resources of either of the committees and that arrangements must be made for financing this plan from private contributions. Dr. Wood submitted a comprehensive report covering a system of exhibit charts which he had devised for presenting the important features of the committees' work. Plans for securing a large number of copies of these charts for use in educational and sanitary exhibits were discussed. Dr. Wood stated that the distribution of the pamphlet on "Minimum Sanitary Requirements for Rural Schools" should in his judgment be followed by the development of some kind of prize system by which prizes could be offered to the rural school districts showing the greatest improvement during a given period of time. Plans for financing this suggestion were considered.

In the afternoon of February 23, the joint committee had charge of the program before the general session of the Department of Superintendence at Music Hall, the general subject being health problems in the public schools. Dr. Wood introduced the subject before a large audience and the discussion of the different phases of it was conducted by Dr. Favill, President Snyder and Drs. Dodson, Green and Corwin.

The committee had a booth in the exhibit hall in which were displayed the charts prepared by Dr. Wood. Copies of the report of the committee and the "Minimum Sanitary Requirements for Rural Schools," were distributed to those interested.

It is a great gratification to the committee to be able to report that since the Cincinnati conference, through the generosity of the Elizabeth McCormick Memorial Fund, an appropriation has been made sufficient to print 750,000 copies of the "Minimum Sanitary Requirements for Rural Schools" for Dr. Claxton's use. The preparation of this large edition marks the completion of the first stage of the committee's work; namely, that of investigating the physical condition of rural schools, formulating a statement of the minimum sanitary requirements which should be accepted by any school district and distributing this information to those responsible for such conditions. The two recommendations of Dr. Wood which were discussed at Cincinnati, namely, the offering of prizes for the school district which should show the greatest progress during a given period of time, and the preparation of sets of exhibit cards suitable for educational and sanitary exhibit are still under discussion. It is earnestly hoped that during the coming year, the committee may be able to secure sufficient support from outside sources to finance these two important educational plans.

The work of this committee in co-ordinating the educational and the medical professions has been of the utmost value and the distribution of the pamphlet prepared by the committee cannot fail to exercise a marked and permanent influence for the betterment of rural school conditions through the country.

Respectfully submitted,
R. W. CORWIN, Chairman.
R. M. DODSON,
M. J. ROSENAU.

COMMITTEE ON UNIFORM REGULATION OF MEMBERSHIP

To the Council on Health and Public Instruction:

In the report of the committee last year, the recommendations adopted by the Conference of State Secretaries at the meeting in Chicago, Oct. 23, 1912, were stated; also the report of progress in adopting these recommendations as shown by the statements of the secretaries at the Conference of State Secretaries held in Chicago, Feb. 25, 1914. These reports from the various state secretaries showed that practical uniformity in membership regulation is gradually becoming prevalent throughout the organization. This change is taking place through a recognition on the part of the executive officers of the various state societies of the need of simple, uniform methods, both for the management of the state society itself and for co-ordinating the work of each state secretary with that of other state secretaries and with that of the

American Medical Association. As such action must necessarily result from the voluntary cooperation of the various state societies, this committee has deemed it advisable during the past year to allow this change to take place voluntarily rather than to attempt to bring it about more rapidly through any further conferences. The meeting of the state secretaries at the time of the annual meeting affords an ample opportunity for the discussion of these topics without the expense involved in a midwinter conference of state secretaries. The committee feels that it is of value in bringing about better co-ordination through the stimulation of a mutual feeling of cooperation rather than through the adoption or pressure of any hard and fast rules or regulations. We therefore recommend that the committee be continued with instructions to carry on further efforts for securing uniformity in such ways as it may deem advisable and that whenever possible in connection with the annual sessions of the Association this subject in some of its phases be made a topic of discussion for meetings of state secretaries.

Respectfully submitted,

THOMAS MCDAVITT, Chairman.
E. J. GODWIN,
CLAUDE THOMPSON,
CHAS. N. COMBS,
E. F. HOWARD,
FREDERICK R. GREEN, Secretary.

COMMITTEE ON CONSERVATION OF VISION

To the Council on Health and Public Instruction:

Owing to the general financial depression, the appropriation of this committee has been reduced to $600 per annum, a sum which is manifestly inadequate to carry on its work in anything like a proper manner. The chairman of this committee and several of its members have been compelled to contribute money from their own pockets, in order to help the work. This is a distinctly unfair procedure, especially when it is remembered that this work is being carried on by busy physicians, of limited means, as a pure labor of duty and interest. These men receive no compensation for their labor or time, and practically all of the traveling and other expenses incident to the lectures delivered during the last two years, under the auspices of this committee, have been met by the medical profession, and usually by the men or women delivering these lectures.

In reviewing the work of the first year, the success of the state lecture bureaus becomes manifest. A brief tabulation of the lectures delivered is here given.

From this it will be seen that lectures have been given in thirty-eight states, and that 490 lectures have been delivered to audiences aggregating 113,898 people.

This is a distinct gain on the work accomplished last year, when 339 lectures were delivered in thirty states to audiences aggregating 69,425 people. It will thus be seen that in the last two years this committee has been able to report 829 lectures delivered to audiences aggregating 183,323 people. It is difficult to estimate the widespread influence of this campaign, and this committee begs to thank these state managers and these lecturers for their work, interest and money.

Enthusiastic letters and reports from most of the states have been received, concerning the interest created by these lectures, and the beneficial results following. The lectures should, by all means, be continued, for, while thousands have heard them, millions have not heard them, who should hear them. Let not the state managers think, therefore, that enough lecturing has been accomplished during the past two seasons. Good work has, it is true, been done, but much remains to be done. Therefore, let the lectures go on, in other towns and cities, or in the same towns and cities, for that matter. The chairman's mail is burdened with encouraging reports received by the various state managers. It is not possible in a short report to attempt, in any degree, a literal reproduction of these letters as to *actual results* which have followed in the wake of our campaign. The chairman will therefore venture to enumerate a few random reports, just as they come to hand in looking over his correspondence, leaving it to your imagination to conceive the remainder.

For instance, in Butte, Mont., successful results were obtained in the following diseases noticed in schoolchildren, whose eyes, ears, etc., had been tested: 42 tonsils and adenoids; 20 refraction; 3 conjunctivitis; 1 discharging ear; 1 catarrhal deafness. In Seattle, Wash., a nearly perfect system of medical school inspection has been placed in operation. In nine months, 3,886 cases have been treated among the children, and 243 operations have been performed; 42,000 schoolchildren have been examined, 1,600 homes have been visited and school nurses have been inaugurated. In South Dakota, a Society of School Hygiene has been formed in Deadwood, and several cities have adopted medical school inspection. Operations have been performed in many cases of tonsils and adenoids, and many pairs of glasses have been fitted in the various towns and cities. In Pennsylvania, 400,000 schoolchildren were examined last year. In Philadelphia, there are three school clinics for eyes—one where services and glasses are given free. The attending eye surgeons are paid by the city. Two hundred thousand slips have been pasted in schoolbooks, giving advice as to the care of the eyes. In Portland and La Grande, Ore., the eyes, ears, noses and throats of the schoolchildren are annually and systematically examined by schoolteachers. In Alabama, Walker County has a full-time health officer; Tuscaloosa and New Decatur have regular medical school inspectors. In Utah, each schoolroom in Salt Lake City is supplied with charts for testing eyes, ears, etc., and there are seven school nurses in that city. In New Hampshire, twenty-nine towns and cities have medical school inspection. In Ohio, Germantown has just adopted medical school inspection. One lecture was the means of establishing another field worker. Many cases of tonsils, adenoids, cataracts, strabismus, etc., have been operated on, and many glasses have been fitted. Many small pamphlets and leaflets have been issued and much newspaper publicity has been obtained. Several epidemics of trachoma have been

LECTURES DELIVERED

State Manager	State	No. of Lectures	Estimated Size of Audiences
1. C. W. Banner	North Carolina	5	1,000
2. W. B. Lancaster	Massachusetts	8	1,475
3. H. A. Beaudoux	Minneapolis	6	2,800
4. C. Loeb	Missouri	6	500
5. C. W. Kollock	South Carolina	6	600
6. N. M. Black	Wisconsin	9	1,700
7. J. La Rue Robinson	Nevada	2	550
8. E. C. Ellett	Tennessee	9	2,700
9. D. Roy	Georgia	5	1,575
10. E. F. Davis	Oklahoma	7	1,400
11. R. W. Perry	Washington	1	175
12. F. P. Lewis, E. M. Alger	New York*	61	16,921
13. L. A. Bize	Florida	10	1,925
14. C. F. Adams	New Jersey	6	185
15. D. M. Lindsay	Utah	23	3,240
16. S. L. Ledbetter	Alabama	9	1,140
17. J. A. Spalding	Maine	37	6,584
18. T. A. Grigg	Montana	3	400
19. J. G. Parsons	South Dakota	11	1,750
20. G. C. Schaeffer	Ohio*	78	19,285
21. C. H. Babbitt	New Hampshire	2	300
22. R. L. Nourse	Idaho	11	2,700
23. L. W. Dean	Iowa	2	300
24. W. R. Parker	Michigan	13	5,500
25. J. A. White	Virginia	2	600
26. J. O. McReynolds	Texas	56	11,108
27. J. A. Stucky	Kentucky	13	3,900
28. B. F. Matheny	West Virginia	2	1,000
29. P. Guilford	Illinois	18	6,350
30. P. McCool	Oregon	2	200
31. J. J. Carroll	Maryland	8	825
32. G. L. Strader	Wyoming	1	200
33. J. H. Rindlaub	North Dakota	24	3,975
34. G. H. Warren	Connecticut	3	700
35. W. Reber	Pennsylvania	6	450
36. J. A. Ellegood	Delaware	1	600
37. J. M. Patton	Nebraska	2	285
38. A. E. Bulson	Indiana	15	6,000
		490	113,898

* Most of the work accomplished in Ohio and New York has been done under the auspices of the State Organization for Visual Conservation.

discovered and stopped. In Iowa, systematic and annual eye, ear, nose and throat tests are made, and school nurses are in attendance in Marshalltown, Fort Madison, etc. In North Dakota, annual and systematic eye, ear, nose and throat tests are made in LaMoure, Grand Forks, Fargo, etc., and in Wells, McHenry and Ransom counties; in these places they also have school nurses. In Wyoming, Cheyenne enjoys medical school inspection. In Kentucky, they are making a strong effort to pass a law for the annual and systematic examination of schoolchildren's eyes, ears, noses and throats by schoolteachers. Our committee is materially helping the movement to stamp out trachoma. A recently enacted law in Kentucky compels the State Board of Health to conduct schools in each county, on which attendance is made compulsory, for the instruction of physicians and midwives concerning the prevention of blindness, with particular reference to trachoma and ophthalmia neonatorum. In Maryland, Miss M. V. Kelly, a field agent, visited the schools and hospitals in Salisbury, Euston and Cambridge and interviewed the doctors and found many cases of bad eyes, and saw that many were relieved.

It is interesting to relate that one optician alone in Chicago, sold about 5,000 vision charts for schools, with teachers' instructions attached, during the past year. This will be something of an indication as to the interest awakened in this matter.

These few state reports refer to fragmentary work performed quite recently, and do not at all indicate the total amount of state work accomplished. The chairman merely wishes to convey by these scattering and fragmentary items the impression that our work is creating interest all over the United States. Our lecturers have not confined themselves to lectures purely devoted to the eyes, but have included ears, noses and throats in their talks, and have dwelt a great deal on the general subject of medical school inspection, and their labors have borne fruit all along these lines. The chairman does not wish to convey the idea that all eye work in the several states has been the result of the work of this committee; this would not be true, especially in such states as Ohio, New York, Pennsylvania, etc., where they have most efficient state organizations. The chairman merely wishes to declare that this committee is one of the factors working for good in the United States, and that its work is surely helping along the movement for visual conservation, and that many of the good results can be directly traced to the influence of this committee. A work which, for instance (in most instances), can be fairly attributed to the influence of this committee and usually to its *direct* personal influence, is the passage of laws in some states for the annual and systematic examination of schoolchildren's eyes, ears, noses and throats. Eighteen states have laws of this character. The names of these states is here given with the dates of the enactment: (1) Connecticut, 1899; (2) Massachusetts, 1906; (3) Colorado, 1909; (4) Maine, 1909; (5) Pennsylvania, 1911; (6) Indiana, 1911; (7) Utah, 1911; (8) Vermont, 1912; (9) North Dakota, 1913; (10) West Virginia, 1913; (11) New Hampshire, 1913; (12) New Jersey, 1913; (13) New York, 1913; (14) Maryland, 1914; (15) Wyoming, 1915; (16) South Carolina, 1915; (17) Oklahoma, 1915; (18) Delaware, 1915. It would be desirable to give these various laws in detail, but space forbids; suffice it to say that they vary considerably in their language and requirements—some merely advise that this work be done, that the state endorses it and will pay the expenses of furnishing printed material for the tests up to a certain limit. Others make the procedure obligatory, while one state (Delaware) has not state law, but the tests are ordered by the Board of Education.

While a publication, at this time, of all these laws is impracticable, it has been deemed advisable to publish one of the best laws, to guide those interested in the passage of such laws in other states, concerning a reasonably good law to present to the legislatures. A copy of the Wyoming law is here given. It is particularly praiseworthy on account of its brevity, plainness and unambiguous language.

THE WYOMING LAW

Section 1. It shall be the duty of every teacher engaged in teaching in the public schools of incorporated cities and towns of the state separately and carefully to test and examine every child under his jurisdiction to ascertain if such child is suffering from defective sight or hearing or disease of nose and throat.

Section 2. In making the tests required by Section 1 of this act the teacher shall employ eye testing charts of a standard character approved and supplied by the State Superintendent of Public Instruction and shall conform to the rules of the State Superintendent in methods of applying such tests, especial attention being given to defects that may be disclosed by the following questions:

1. Does the pupil habitually suffer from inflamed lids or eyes.
2. Does the pupil fail to read a majority of the letters in the number 20 line of the standard vision chart with either eye.
3. Do the eyes and head habitually grow weary and painful after study?
4. Does the pupil appear to be "cross-eyed?"
5. Does the pupil complain of earache in either ear?
6. Does matter (pus) or a foul odor proceed from either ear?
7. Does the pupil fail to hear an ordinary voice at twenty feet in a quiet room?
8. Is the pupil frequently subject to "colds in the head" and discharges from the nose and throat?
9. Is the pupil an habitual "mouth breather?"

If an affirmative answer is found to any of these questions the teacher shall give such pupil a report to his parent or guardian made on a report blank prepared and furnished by the State Superintendent of Public Instruction, such report to be made in form prescribed by the State Superintendent.

It shall be the further duty of the teacher to record the results of the examinations required by Section 1 of this Act in such a manner as may be described by the State Superintendent of Public Instruction.

Section 3. It shall be the duty of the State Superintendent of Public Instruction to prescribe rules for making such tests as are required by this Act and to prepare copies thereof, together with all blanks, charts and printed forms deemed necessary by the State Superintendent for carrying into effect the provisions of this Act, and to distribute them to all the public school teachers in incorporated cities and towns of the state, such distribution to be made through the district boards or, if there be such, through the executive officers thereof, the expenses of such printing and distribution to be borne out of the State Superintendent's contingent; provided that, the annual expense for such purpose shall not exceed one hundred and fifty dollars.

Section 4. During the first month of each school year, after the opening of school, teachers must make the tests required of this act upon the children then in attendance at school; and thereafter, as children enter school during the year, such tests must be made immediately upon their entrance.

Section 5. It shall be the duty of the Boards of Trustees of the several school districts of the State to enforce the provisions of this Act.

Section 6. This Act shall take effect and be in force from and after July 1, 1915.

It will be observed that the last ten states to pass eye and ear laws date the laws from 1913. It was in 1913 that this committee began its work, and it is only fair to presume that the passage of those laws in 1913, 1914 and 1915 was more or less inspired by the existence of this committee. Indeed, in some of the states like Wyoming, South Carolina, Oklahoma and Delaware it can be safely said that the laws were passed through the direct influence of our managers and lecturers in those states. The Wyoming law owes its existence, for instance, to Dr. George L. Strader, our state lecture bureau manager, who is also a member of the state legislature; and the Delaware law would never have been passed had it not been for the work of the state manager, Dr. J. A. Ellegood.

Many of our state organizations are helping greatly in the passage of laws concerning ophthalmia neonatorum, trachoma and in fighting optometry laws; and it can be truthfully said that the influence of this committee can hardly be overestimated in promulgating the doctrine of good eyes, along all of its channels.

One embarrassment in our work has been the changing of state managers. This occurs usually through lack of results and indisposition or inability to put the necessary work into the undertaking. Some men have accepted these positions and have then practically done nothing, except perhaps write a few letters. This will, of course, utterly defeat the intention of this committee. The chairman works hard and constantly in this cause but he cannot do it all. It is necessary for us to have representatives in each state, to manage state affairs, who are deeply interested in the cause and are willing to really work for its success. A man who accepts the position of state manager on this committee should be able to show excellent state progress at the end of the season. Most of the managers have done this, but some have not, and it is hoped they will appreciate the importance of their positions from now on, and be able to show good results next season. The success of this work depends largely on them.

It has greatly facilitated our work to have our state managers appointed by the various state medical societies as chairmen of the various conservation of vision committees. This has been done by thirty-four of the states, and it is hoped that the other states will help us in this work immediately. Those states that have made such appointments are:

Alabama	Indiana
Arkansas	Iowa
California	Kansas
Delaware	Kentucky
District of Columbia	Maryland
Florida	Massachusetts
Illinois	Michigan
Missouri	Ohio
Nebraska	Oklahoma
Nevada	Oregon
New Hampshire	Pennsylvania
New Jersey	South Carolina
New Mexico	South Dakota
New York	Tennessee
North Carolina	Texas
Utah	Virginia
Wisconsin	Wyoming

The committee has not published any new pamphlets this year, feeling that, inasmuch as it has now in active circulation twenty pamphlets on ocular subjects for laity reading, it was perhaps enough for the past season. Several new pamphlets, however, have been written and are ready for printing, and will shortly be published. Our conservation of vision pamphlets have been a great success, and about 34,000 are in circulation—either by free distribution or sale. They have been a great factor for good.

The committee intends, the next season, to print and distribute a large number of little leaflets on various practical ocular subjects, written in a few plain words with short sentences and one or two significant pictures. One has already been written and will shortly be published, and others will quickly follow.

Our lecturers are greatly in need of new stereopticon pictures, to encourage them in their work, and to enable them to deliver more interesting lectures. We have now twenty-eight pictures for each state, and this number should be increased to fifty. We are especially in need of pictures showing the various kinds of shop accidents, and how they can be avoided. The expense would not be great, and it is hoped that the money may be provided. It is of great importance to keep up the interest of our state managers, and this can be best done with supplying them with what material they actually need—for the prosecution of their work. Most of them are working hard and need encouragement.

To recapitulate, then, what has this committee accomplished during the last two years, to justify its existence in the past, and to warrant its continuance and liberal support in the future?

1. It has provided 829 lectures to audiences aggregating 183,223 people.

2. It has caused to be written twenty pamphlets on eye subjects, with a distribution of 34,000.

3. It has supplied the *Press Bulletin* of the American Medical Association with short, practical articles on eye subjects that have reached hundreds of thousands of people.

4. It has distinctly aided in producing a sentiment over this entire country on the subject of visual conservation.

5. It has been the means of greatly assisting in the enactment of laws, concerning the examination of schoolchildren's eyes, ears, noses and throats, and laws concerning trachoma and ophthalmia neonatorum. It has also greatly assisted in defeating laws concerning the practice of optometry.

6. It has had much to do with regard to stimulating interest in general medical school inspection, school nurses, etc., and in the establishment of these much needed conditions in many cities.

7. It has been the means of relieving thousands of schoolchildren of adenoids, enlarged tonsils, discharging ears, deafness, inflamed eyes, crossed eyes, headaches, nearsightedness, etc., and thus has not only improved their educational possibilities and general physical and sociologic conditions, but also at the same time has greatly benefited the physical, mental and nervous condition of their teachers.

8. It has signally aided the campaign against "shop accidents" by its pamphlets, lectures, etc., warning the public against such accidents, and how they can be best prevented.

These are perhaps sufficient reasons for the continued existence of this committee, although others might be given. It is to be hoped that the committee, the state managers, the lecturers, and others, will be sufficiently encouraged from the work of the past year to go on with the campaign the coming year, with renewed enthusiasm and industry.

FRANK ALLPORT, Chairman.

Report of the Council on Medical Education

In the absence of the Chairman of the Council on Medical Education, Dr. Arthur D. Bevan, Illinois, the report was read by the Secretary of the Council, Dr. N. P. Colwell.

The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

In the Council's report in 1905, just ten years ago, two educational standards were presented, one which was recommended for immediate adoption and the other, referred to as the "ideal standard," for adoption at some future time. The first called for a graded medical course consisting of four years of seven months each, based on the completion of the usual four-year high school education. The "ideal standard," in brief, called for a standard four-year high school education, a year devoted to college courses in physics, chemistry and biology, the four-year medical course, and a year's practical training as an intern in a hospital.

The college session just closed marks an important epoch in the history of medical education. With the exception of the hospital intern year, the standard which in 1905 was referred to as "ideal," in 1914 became the essential standard. Last fall thirty-seven medical colleges began for the first time the enforcement of the entrance requirement of a college year in physics, chemistry and biology, joining the forty-seven which had already gone to that or higher entrance requirements, making altogether eight-four medical colleges out of the one hundred now existing which are operating under the higher standard.

MEDICAL COLLEGES

The progress among the colleges during the last eleven years toward the general adoption of higher entrance standards is graphically shown in Chart 1, which resembles somewhat a temperature chart. The comparison is really a good one. The country's supply of medical schools in 1904 was far above normal, but has been reduced, as indicated by the upper line, to an even hundred medical colleges. Note that the marked reduction began with the session of 1906-1907, when the Council completed its first inspection of medical colleges.

The lower line in the chart shows the progress among the colleges in the adoption of higher entrance standards. The Council's campaign for higher entrance standards was begun in 1906, and Jan. 1, 1910, was suggested as the date when the requirement was to become effective. Several of the better situated colleges, however, put the requirement into effect at an earlier date. Other colleges fixed on later dates, and the rise between 1908 and 1913 shows a steady and rapid increase. The exceptionally rapid rise in 1914 was due to the resolution adopted by the House of Delegates of the American Medical Association in 1912 instructing the Council to include in Class A, after Jan. 1, 1914, only such colleges as were requiring the higher standard.

This chart allows of a forecast of the outcome of the campaign for higher standards. According to this chart, when all the colleges shall have adopted the higher entrance requirement, the number will be somewhere between seventy-five and ninety.

CHART 1.—FEWER BUT BETTER MEDICAL COLLEGES

A LARGE OVERSUPPLY REDUCED TO A MORE NORMAL QUANTITY OF HIGHER GRADE INSTITUTIONS.

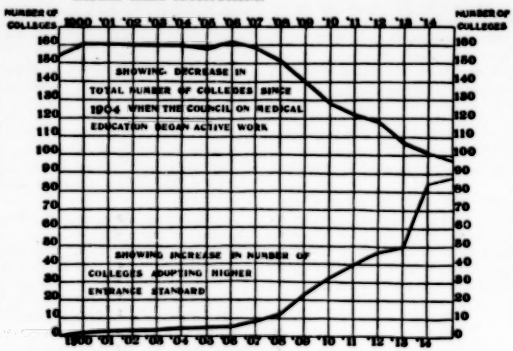
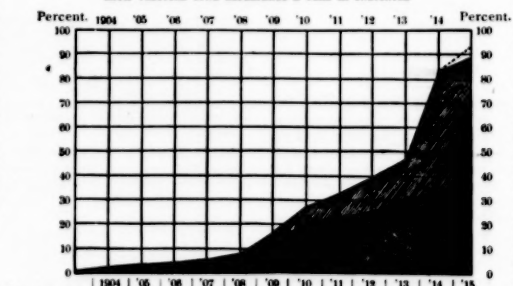

NUMBER OF COLLEGES
1900 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14
NUMBER OF COLLEGES
SHOWING DECREASE IN TOTAL NUMBER OF COLLEGES SINCE 1904 WHEN THE COUNCIL ON MEDICAL EDUCATION BEGAN ACTIVE WORK
SHOWING INCREASE IN NUMBER OF COLLEGES ADOPTING HIGHER ENTRANCE STANDARD

CHART 2.—IMPROVED ENTRANCE REQUIREMENTS TO MEDICAL COLLEGES

SHOWING PERCENTAGE INCREASE BY YEARS IN THE NUMBER OF COLLEGES REQUIRING (LIGHT SHADING) ONE YEAR, AND (HEAVY SHADING) TWO OR MORE YEARS OF COLLEGIATE WORK FOR ADMISSION. UNSHADED PORTION OF CHART SHOWS PROPORTION REQUIRING A HIGH SCHOOL COURSE, OR LESS, FOR ENTRANCE.

EACH VERTICAL LINE REPRESENTS A YEAR AS INDICATED



Percent.	1904	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
High Sch. Ed.	97.5	96.8	96.3	94.4	92.1	83.6	71.8	67.2	60.2	53.3	16.8	11.0
1 yr. College	....	....	0.6	0.6	1.3	4.3	7.6	9.8	14.4	16.8	49.5	51.0
2 yrs. College	2.5	3.2	3.1	5.0	6.6	12.1	20.6	23.0	25.4	29.9	33.7	38.0

COLLEGE ADMISSION REQUIREMENTS BY PERCENTAGES

The adoption by medical colleges of higher entrance standards is shown by percentages in Chart 2. The lighter shading shows the increase in the percentage requiring one or more years of collegiate work, and the heavier shading shows those requiring two years of collegiate work. The white portion of the chart shows the corresponding reduction in the percentage of medical colleges requiring a high school education *or less*.

EFFECT OF HIGHER STANDARD ON STUDENT ENROLMENTS

As expected, this general adoption of the higher entrance requirement has caused a decrease in the total student enrolment. The accompanying table shows, however, that after a year or two has been allowed for readjustment, the enrolments will return more nearly to normal.

Of the 100 medical colleges still existing, eighty-four have put into effect the requirement for admission of one or more years of collegiate work, in addition to a high school education. In thirty-seven colleges the higher requirement began in 1914—at the beginning of the present college session—and, with one exception, these colleges had decreased enrolments. A few of the colleges have limited their enrolments, so show neither increase nor decrease. In forty-seven colleges, however, the higher requirement became effective in 1913 or earlier, and from forty-two of these, reports have been received showing this year's enrolments of students, and all but four report either increased enrolments or larger freshman classes. The figures are shown in the accompanying table.

CARE IN ADMINISTERING ENTRANCE REQUIREMENTS

In the thirty-seven medical schools which began the higher requirement in 1914, the percentage of decrease varied considerably, depending on the thoroughness with which the requirement was enforced. Some colleges were found to have used considerable liberality in administering the higher standard, but even these colleges largely reduced their freshman classes and greatly improved the quality of students admitted. In justice to many colleges, it is believed that for a year or two certain conditions, hereinafter set forth, should be allowed.

In order to appreciate how marvelous the improvement in the entrance requirements to medical schools has been during the last ten years, it must be remembered that in 1904 a very small proportion (not more than 15 or 20 per cent.) of all medical colleges were really requiring a four-year high school education for admission, whereas at the present time at least 85 to 90 per cent. of all colleges are on that or higher standards. In 1904 only four medical colleges (less than 3 per cent. of the total number) required for admission one or more years of collegiate work, in addition to the high school education; now eighty-six (86 per cent. of all colleges) are on that standard, and of these, thirty-nine are requiring two or more years of collegiate work. In

1904 very little was known about the practice of colleges, and such standards as were advocated were largely on paper; at that time no systematic check was kept on the methods used by the medical schools in administering entrance requirements; now, through the Students' Register, the standards actually enforced by each college are known, faulty methods or "paper standards" are discovered and corrected or exposed, and instead of being an unknown quantity, preliminary requirements are now known with fair accuracy. Of course, there is still room for improvement in methods of administration as well as in the securing of better standards. It is believed, however, that the following revised standard of preliminary education is practicable and can be fairly well enforced.

TABLE—VARIATIONS IN MEDICAL COLLEGE ENROLMENTS

Figures showing numbers of colleges having enrolments in the session of 1914-15, respectively, larger, equal or smaller than in the session of 1913-14.

Total Registration This Year	Medical Colleges Requiring for Admission					
	Two Years of College Work, Effective in		One Year of College Work, Effective in		High School Course	Total Colleges
	1913 or Previous	In 1914	1913 or Previous	In 1914		
Increased	23	..	7	1	3	34
Equal	3	..	1	..	..	4
Decreased	4 (3)	3 (1)	4 (2)	29 (2)	5	45 (8)
Totals	30	3	12	30	8	83

Figures in parenthesis show number of colleges which, although the total enrolment was diminished, had larger freshman classes than a year ago.

REVISED REQUIREMENTS FOR ADMISSION TO MEDICAL SCHOOLS

These were published in THE JOURNAL, April 24, 1915, p. 1421.

CLASSIFICATIONS OF MEDICAL COLLEGES

A brief statement in regard to the various classifications presented by the Council will be interesting. Meanwhile, the Council regards all these classifications as temporary expedients, and hopes the time will soon come when there will be no need of them.

The first classification presented was in 1905, when the 158 medical schools then existing were divided into three groups based on the failures of their graduates at the examinations of state licensing boards. Group 1 contained forty-seven colleges which had less than 10 per cent. of failures; Group 2 contained twenty-seven colleges which had between 10 and 20 per cent. of failures, and Group 3 contained thirty-eight colleges which had over 20 per cent. of failures. There were ten colleges which did not give the complete medical course, and thirty-six others in regard to which the data were insufficient to permit of their classification.

The second classification was presented in 1907, and followed the first complete tour of inspection. The 162 colleges then existing were graded on a civil service basis and were divided into three groups. Group 1 contained eighty-three colleges whose grades were 70 per cent. or above; Group 2 contained forty-seven colleges whose grades were between 50 and 70 per cent., and Group 3 contained thirty-two colleges graded below 50 per cent. This classification was presented at the Council's annual conference and at the meeting of the House of Delegates in 1907. It was not published, but each college was notified of the rating given to it.

The third classification was made in 1910, following the second complete tour of inspection. In this classification the 135 medical colleges were divided into Classes A, B and C. The Class A group included seventy-four colleges which were considered "acceptable," the Class B group included thirty colleges which "needed certain improvements to make them acceptable," and the Class C group included thirty-one colleges in regard to which "a complete reorganization" would be required to make them acceptable.

The Council's fourth complete classification of the medical colleges in the United States was prepared and presented to this body in 1912. That classification included 118 medical colleges, as follows:

FOURTH CLASSIFICATION OF MEDICAL COLLEGES

	Class A+	A	B	C	Total
Giving complete course	22	35	23	29	109
Giving two years only	2	6	1	..	9
Total	24	41	24	29	118

The A+ group was introduced to designate the very acceptable schools which, in addition to having the necessary equipment, courses, etc., required a premedical science training for admission. The adoption of this premedical science requirement by eighty-nine of the 100 medical schools now remaining has automatically eliminated the A+ classification.

A REVISED GROUPING

A fifth grouping of the colleges is now presented, which has a definite purpose. It divides the schools of the country into three groups, an acceptable group which the Council believes are worthy of recognition by the state licensing boards; a Class C group, now including a very limited number of schools, which the Council believes are unworthy of recognition by the state boards; and a Class B group of schools, consisting of those colleges the future of which is uncertain, and the recognition of which should be carefully determined by the state boards themselves. This revised classification contains just 100 medical colleges as follows:

CLASS A—ACCEPTABLE MEDICAL COLLEGES

ALABAMA
University of Alabama, School of Medicine.....Mobile

CALIFORNIA
Leland Stanford Junior University, School of Medicine..San Francisco
University of California, Medical School.....San Francisco

COLORADO
University of Colorado, School of Medicine.....Boulder-Denver

CONNECTICUT
Yale Medical School.....New Haven

DISTRICT OF COLUMBIA
Georgetown University, School of Medicine.....Washington
George Washington University, Medical School.....Washington
Howard University School of Medicine.....Washington

GEORGIA
Atlanta Medical College.....Atlanta
University of Georgia Medical Department.....Augusta

ILLINOIS
Northwestern University Medical School.....Chicago
Rush Medical College (University of Chicago).....Chicago
University of Illinois, College of Medicine.....Chicago

INDIANA
Indiana University, School of Medicine.....Bloomington-Indianapolis

IOWA
State University of Iowa, College of Medicine.....Iowa City
State University of Iowa, College of Homeopathic Medicine..Iowa City

KANSAS
University of Kansas, School of Medicine.....Lawrence-Rosedale

KENTUCKY
University of Louisville, Medical Department.....Louisville

LOUISIANA
Tulane University of Louisiana, School of Medicine.....New Orleans

MAINE
Medical School of Maine.....Brunswick-Portland

MARYLAND
College of Physicians and Surgeons.....Baltimore
Johns Hopkins University, Medical Department.....Baltimore
University of Maryland, School of Medicine.....Baltimore

MASSACHUSETTS
Boston University, School of Medicine.....Boston
Medical School of Harvard University.....Boston
Tufts College Medical School.....Boston

MICHIGAN
Detroit College of Medicine and Surgery.....Detroit
University of Michigan, Dept. of Medicine and Surgery....Ann Arbor
University of Michigan, Homeopathic Medical College.....Ann Arbor

MINNESOTA
University of Minnesota Medical School.....Minneapolis

MISSISSIPPI
University of Mississippi, Department of Medicine*.....Oxford

Missouri
St. Louis University, School of Medicine.....St. Louis
University of Missouri, School of Medicine*.....Columbia
Washington University Medical School.....St. Louis

Nebraska
University of Nebraska, College of Medicine.....Omaha

New Hampshire
Dartmouth Medical School*.....Hanover

New York
Albany Medical College.....Albany
Columbia University, Coll. of Physicians and Surgeons...New York City
Cornell University Medical College.....New York City
Fordham University, School of Medicine.....New York City
Long Island College Hospital.....New York City
Syracuse University, College of Medicine.....Syracuse
University and Bellevue Hospital Medical College.....New York City
University of Buffalo, Medical Department.....Buffalo

North Carolina
University of North Carolina, School of Medicine*.....Chapel Hill
Wake Forest College School of Medicine*.....Wake Forest

North Dakota
University of North Dakota, School of Medicine*.....University

Ohio
Western Reserve University, School of Medicine.....Cleveland
Medical College of the University of Cincinnati.....Cincinnati
Ohio State University, College of Medicine.....Columbus

Oregon
University of Oregon, Department of Medicine.....Portland

Pennsylvania
Hahnemann Medical College and Hospital.....Philadelphia
Jefferson Medical College.....Philadelphia
Medico-Chirurgical College of Philadelphia.....Philadelphia
University of Pennsylvania, School of Medicine.....Philadelphia
University of Pittsburgh, School of Medicine.....Pittsburgh
Woman's Medical College of Pennsylvania.....Philadelphia

South Dakota
University of South Dakota, College of Medicine*.....Vermilion

Tennessee
Vanderbilt University, Medical Department.....Nashville
University of Tennessee, College of Medicine.....Memphis

Texas
University of Texas, Department of Medicine.....Galveston

Utah
University of Utah, School of Medicine*.....Salt Lake City

Vermont
University of Vermont, College of Medicine*.....Burlington

Virginia
Medical College of Virginia.....Richmond
University of Virginia, Department of Medicine.....Charlottesville

Wisconsin
Marquette University, School of Medicine.....Milwaukee
University of Wisconsin Medical School*.....Madison
Total, 67.

CLASS B—COLLEGES NEEDING GENERAL IMPROVEMENTS TO BE MADE ACCEPTABLE

Arkansas
University of Arkansas, Medical Department.....Little Rock

California
College of Physicians and Surgeons.....Los Angeles
Hahnemann Medical College of the Pacific.....San Francisco
Oakland College of Medicine and Surgery.....Oakland

Illinois
Bennett Medical College.....Chicago
Chicago College of Medicine and Surgery.....Chicago
Hahnemann Medical College and Hospital.....Chicago

Nebraska
John A. Creighton Medical College.....Omaha

New York
New York Homeopathic Med. Coll. and Flower Hosp.[3]...New York City

North Carolina
Leonard Medical School*.....Raleigh

Ohio
Eclectic Medical College.....Cincinnati

Oklahoma
University of Oklahoma, School of Med.....Norman-Oklahoma City

Pennsylvania
Temple University, Department of Medicine.....Philadelphia

South Carolina
Medical College of the State of South Carolina.....Charleston

Tennessee
Meharry Medical College.....Nashville

Texas
Baylor University, College of Medicine.....Dallas
Southern Methodist University, Medical Department.....Dallas
Texas Christian University, School of Medicine.....Fort Worth

West Virginia
West Virginia University, School of Medicine*.....Morgantown
Total, 19.

CLASS C—COLLEGES REQUIRING A COMPLETE REORGANIZATION TO MAKE THEM ACCEPTABLE

California
California Eclectic Medical College.....Los Angeles
College of Physicians and Surgeons.....San Francisco
College of Medical Evangelists.....Loma Linda

Georgia
Georgia College of Eclectic Medicine and Surgery.....Atlanta

Illinois
Chicago Hospital College of Medicine.....Chicago
Jenner Medical College.....Chicago

Massachusetts
College of Physicians and Surgeons[2].....Boston

Missouri
American Medical College[4].....St. Louis
Eclectic Medical University[4].....Kansas City
Kansas City Hahnemann Medical College.....Kansas City
St. Louis College of Physicians and Surgeons.....St. Louis

Nebraska
Cotner University Medical College[5].....Lincoln

New York
New York Med. Coll. and Hosp. for Women.....New York City

Tennessee
University of West Tenn. Coll. of Med. and Surg.....Memphis
Total, 14.

* These colleges give only the first two years of the medical course. Leonard Medical College discontinued clinical teaching in June, 1914.
1. Rating dropped to Class B, Feb. 15, 1915.
2. Reported not recognized by the Massachusetts Medical Society.
3. Also known as the Medical Department of the National University of Arts and Sciences.
4. Reported not recognized by the Missouri State Board of Health.
5. Formerly known as the Lincoln Medical College.

Progress Toward the Hospital Intern Year

A preliminary investigation of the hospital situation made early in 1913 showed that there were enough hospitals in the United States having over twenty-five beds each to provide an ample number of internships for all students graduating in medicine. But not all these hospitals were using interns, so that only about three fifths of the number of internships needed were being provided. The situation called for a campaign to induce other good hospitals to provide for the use and training of interns.

A more careful investigation was made during the last year, which resulted in the preparation of a list of hospitals provisionally approved from the standpoint of the internships furnished. The reports from the state committees are of particular value, since they indicate what hospitals are worthy of further investigation, should an actual inspection be deemed advisable.

A Recommendation

The Council has gone ahead with the investigation of hospitals far enough to see that to do the work properly will be an enormous task, and that it is a very important and proper work for the American Medical Association to take up. To do the work right will necessitate securing the services of some specially qualified individual to do the inspecting under and with the assistance of the present forces of the Council on Medical Education. We therefore respectfully ask that the Trustees set aside sufficient funds to carry on this work properly.

There are six medical colleges which have adopted the requirement of a fifth year to be spent by the student as an intern in an approved hospital or in other acceptable clinical work before the M.D. degree will be granted. These colleges and the sessions when the requirement became effective are as follows:

University of Minnesota, Medical School.....1910-11
Leland Stanford Jr. University, School of Medicine.....1914-15
Rush Medical College (University of Chicago).....1914-15
University of California, College of Medicine.....1914-15
Northwestern University, Medical School.....1915-16
University of Vermont, College of Medicine.....1915-16

Two state licensing boards, those of Pennsylvania and New Jersey, now require that every candidate to be eligible for license to practice medicine in those states must have served at least one year as an intern in an approved hospital. The requirement became effective in Pennsylvania in 1914, and will become effective in New Jersey in 1916.

EDUCATION STATISTICS

One of the most important functions of the Council is the conducting of a clearing house of information regarding medical education and medical licensure. Besides the numerous reports and pamphlets issued, this information is published principally in two special numbers of THE JOURNAL of the American Medical Association each year, namely, the State Board Number, which appears in April or May, and the Educational Number, which appears in August. Attention is particularly called to the state board statistics published April 24 this year, bound pages of which have been distributed. It needs but a glance at one table published with these statistics (Table D[1]) to show how exceedingly important these statistics are. Without the information in this table, prospective medical students could not know that the diplomas granted by certain medical colleges do not constitute an acceptable qualification for the license to practice in from nine to thirty-three states. A brief review of the facts published shows several points of particular interest:

(*a*) Most of the graduates of each medical college, as a rule, go into practice in the state in which the college is located. States harboring low standard colleges, therefore, are themselves the recipients of most of the ill-trained output of such schools.

(*b*) The total registration in all states in 1914 was 5,797, a reduction of 2,068 below that of 1906, when 7,865 physicians were registered in this country. The number, however, is still nearly three times the number removed annually by deaths.

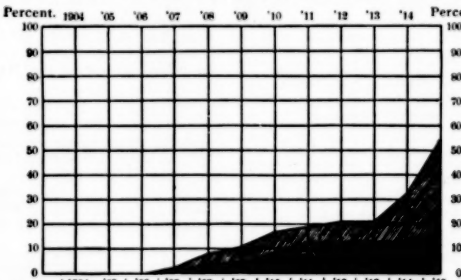
(*c*) Official reports show that the diplomas of thirty-five medical colleges are not recognized for the license to practice medicine in from ten to thirty-two states.

(*d*) Tennessee has obtained a new medical practice act requiring that all applicants for license hereafter must be graduates of reputable medical colleges. A similar requirement now holds in Oregon, through an amendment to the practice act. This leaves only Colorado and Massachusetts which still register nongraduates, whose medical training is known to be incomplete. Colorado, however, has registered only two nongraduates in nine years, while in the same period Massachusetts has registered seventy-six.

CHART 3.—STATE BOARD REQUIREMENTS OF PRELIMINARY EDUCATION

SHOWING THE PERCENTAGE INCREASE BY YEARS IN THE NUMBER OF STATES IN WHICH (LIGHT SHADING) ONE YEAR, AND (HEAVY SHADING) TWO YEARS OF COLLEGIATE WORK HAVE BEEN ADOPTED AS THE MINIMUM STANDARD OF PRELIMINARY EDUCATION. UNSHADED PORTION SHOWS PROPORTION IN WHICH A HIGH SCHOOL EDUCATION OR LESS IS REQUIRED.

EACH VERTICAL LINE REPRESENTS A YEAR AS INDICATED



Percent.	1904	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
High Sch. Ed.	100	100	100	98.0	91.8	89.8	83.6	81.7	79.6	79.6	67.4	44.9
1 yr. College	....	....	....	2.0	4.1	6.1	8.1	6.1	8.2	8.2	20.4	36.7
2 yrs. College	....	....	....	....	4.1	4.1	8.2	12.2	12.2	12.2	12.2	18.4

IMPROVEMENTS IN STATE LICENSURE

Marked improvements in state licensure have taken place during the last year. Improved medical practice acts have recently been secured in California, New Hampshire, New Jersey, Ohio, Oregon and Tennessee.

The requirements of preliminary education by state licensing boards during the years between 1904 and 1915 are shown by percentages in Chart 3. The percentages of states requiring one or two years of college work as a minimum qualification of preliminary education are shown by the light shading; the percentage requiring two years of college work as the minimum are shown by the heavier shading. The white portion of the chart shows the percentage of states holding to a high school education *or less*. The serious lack, in 1904, of legal protection of the public against incompetent doctors cannot be appreciated unless it is remembered that at that time only a few states, in their practice acts, had made any provision for preliminary education. There are still several states which have no such provision.

A very interesting fact, brought out by comparing this chart with Chart 2, is that action by state boards did not proceed, but followed the adoption of higher standards by medical colleges. The progress in this respect, therefore, has been largely voluntary, which is the best assurance that the improvement will be permanent.

Chart 4 shows the standards of preliminary education required in the various states. Nine states require two years of college work, in addition to a four-year high school education. These are:

Alabama	Iowa	New Jersey
Colorado	Minnesota	North Dakota
Indiana	New Hampshire	South Dakota

There are eighteen states which require one year of collegiate work in addition to the high school education or an equivalent five-year medical course. These states are:

Arkansas (Reg.)
California
Connecticut
Illinois
Kansas
Kentucky
Louisiana (Reg.)
Michigan
Mississippi
Oklahoma
Pennsylvania
Rhode Island
Tennessee
Texas
Utah
Vermont
Virginia
Washington

There are thirteen states which require a four-year high school education as the minimum standard of preliminary education. These are:

Delaware
Georgia
Maine
Maryland
Missouri
Nebraska
Nevada
New Mexico
New York
North Carolina
Ohio
West Virginia
Wisconsin

In one state, Montana, the board apparently has the authority to fix the standard of preliminary education, but as yet has not done so.

In four states the authority given the board is limited or divided so that the minimum preliminary standard in each state is less than a four-year high school education. These states are:

Arizona	Florida	South Carolina
Arkansas	Idaho	

In Arkansas, although the regular board has adopted the higher preliminary standard, it is apparent that similar action has not been taken by the homeopathic and eclectic boards.

In three states the practice acts still make no provision for preliminary education. These are:

District of Columbia Massachusetts Wyoming

PENALIZING POWER OF THE LICENSING BOARD

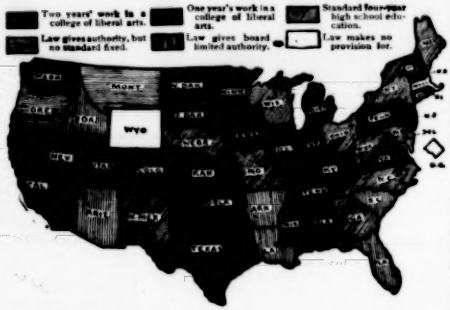
Some state laws provide for standards of preliminary education, but fail to empower the board to refuse to license graduates of such colleges as do not conform to them. Such

1. J. A. M. A., Apr. 24, 1915, p. 1412.

provisions are also ineffective if the board fails to make use of the authority given them. Chart 5 shows to what extent the various states protect the public against ill-trained and incompetent doctors.

As shown in Chart 5, there are thirty states in which the boards have been given full authority to refuse to examine

CHART 4.—STATE REQUIREMENTS OF PRELIMINARY EDUCATION FOR PHYSICIANS


Two years' work in a college of liberal arts.
Law gives authority, but no standard fixed.
One year's work in a college of liberal arts.
Law gives board limited authority.
Standard four-year high school education.
Law makes no provision for.

or to license graduates of inferior medical colleges, and in which the boards are making some use of that authority. These states are:

Alabama	Maryland	Oklahoma
Colorado	Michigan	Pennsylvania
Connecticut	Minnesota	Rhode Island
Delaware	Mississippi	South Carolina
Georgia	New Hampshire	South Dakota
Illinois	New Jersey	Texas
Indiana	New Mexico	Vermont
Iowa	New York	Virginia
Kentucky	North Dakota	West Virginia
Louisiana (Reg.)	Ohio	Wisconsin

There are eleven other states in which the boards appear to have ample authority to refuse recognition to low standard colleges, but thus far have made little use of that authority. These states are:

California	Montana	Oregon
Kansas	Nebraska	Tennessee
Maine	Nevada	Washington
Missouri*	North Carolina	

*In Missouri the licensing board reports one medical college, the Eclectic Medical University of Kansas City, as "not in good standing." Nevertheless the graduates of this college are regularly admitted to the examination of the Eclectic Board of Medical Examiners of Arkansas.

There are nine states in which the boards are apparently without the needed authority to enforce their requirements, or else the authority is divided between two or three boards. These states are:

Arizona	Florida	Massachusetts
Arkansas	Idaho	Utah
District of Columbia	Louisiana	Wyoming

In Arkansas and Florida the laws provide for three separate and independent boards. The regular boards are refusing to license the graduates of low-grade colleges, but evidently similar action has not been taken by the homeopathic and eclectic boards.

There are now only two states, Colorado and Massachusetts, which do not give the licensing boards the authority to insist on graduation from a reputable medical college.

It is clear that the great need in medical licensure in each state is for a single and less complex control of the licensing of practitioners of the healing art by which all practitioners, regardless of the "method" or "system" of treatment employed, will be measured by the same educational standard and be given an equally square deal. If a high standard is fixed for one group of practitioners, it is not right that another group should be admitted to practice under a lower standard. That the public may be properly safeguarded against incompetency, ample authority should be placed in a single board of well-qualified examiners.

Seven states still remain in which there are two or three boards, instead of one, which have to do with the licensing of physicians. These states and the number of boards in each are:

Arkansas, 3		Louisiana, 2
Connecticut, 3	District of Columbia, 3	Maryland, 2
Delaware, 2	Florida, 2	

The authority of the two boards in Delaware is centralized in a medical council, and that of the three boards of the District of Columbia is centralized in a board of medical supervisors. In the other five states, however, instead of a single authority in each to safeguard the public against incompetent practitioners, the entire machinery for examining and licensing physicians is duplicated or triplicated and placed in the hands of two or three separate and independent boards. Such confusion has repeatedly resulted in a practical annulment of educational standards.

Reorganization of Clinical Teaching

Perhaps the most important work of the Council during the past year, and one which will be of inestimable service in the future development of medical education, is the preparation of a report on the reorganization of clinical teaching. (This report was published in full in THE JOURNAL of March 6, 1915, p. 785.)

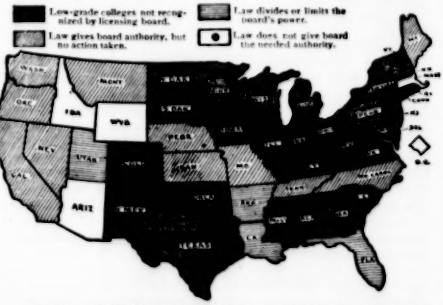
In the efforts to better the methods of clinical teaching in the last few years, a problem has arisen to which particular attention should be drawn.

Fees for Services Rendered

In the reorganization of clinical teaching, we must consider, first, the interests of scientific medicine; second, the interests of the medical profession, and third, the interests of the public. It is clear that the medical profession is entitled

CHART 5.—LEGAL PROTECTION AGAINST INCOMPETENT DOCTORS

SHOWING STATES IN WHICH LICENSING BOARDS HAVE AUTHORITY AND ARE REFUSING TO LICENSE THE GRADUATES OF LOW-GRADE MEDICAL COLLEGES.


Low-grade colleges not recognized by licensing board.
Law gives board authority, but no action taken.
Law divides or limits the board's power.
Law does not give board the needed authority.

Arkansas and Florida each has three separate boards, only one of which (the Regular Board) has refused to license graduates of low-grade medical colleges. Missouri has refused recognition to one medical college.

to proper compensation for its services, and that such compensation should be as large as that received by men in any other profession. No profession requires a more laborious and thorough preparation; no profession and no class of men do so much charity work as the medical profession. Any member of the community who is able, therefore, should pay a proper fee for such medical service as he receives. The plan of having fees for private practice go to the university or to some special department is clearly unethical and

illegal. It is unethical because the compensation for the peculiarly personal and individual services rendered by the medical man to his patient should be paid to the individual rendering those services and not to any one else or to any institution. It is illegal because the fees for such services could not be collected in court by any one except by the individual rendering them. This feature of the Johns Hopkins plan should be clearly pointed out at this time, because if generally adopted, it would be extremely unfair to the medical profession as a whole. If generally adopted, it would be but another method of sweating the medical profession and another abuse of medical charity analogous to the rulings of certain boards of hospital trustees, such as that of the Massachusetts General Hospital, where no member of the medical staff is permitted to receive a fee from any patient in the hospital, even though that patient is sufficiently well-to-do to pay $50 or more a week for hospital accommodations. That such an objectionable feature should have been allowed to creep into the Hopkins plan can be explained only by the fact that the men who devised it were not in sufficiently close touch with the practice of medicine to consider the rights and interests of the profession as a whole. If a clinical teacher is to be limited to a salary and excluded from collecting fees for private practice, then in the interests of the profession as a whole, his practice should be limited to purely charity cases; to those who cannot pay to some member of the medical profession a fee for medical services.

TRAINING OF CLINICAL TEACHERS

Another important matter touched on in the committees' report which should be emphasized is that any system of clinical teaching which may be suggested should provide for the development and training of teachers. Each clinical department, therefore, should be organized with this point in view.

Under the head professor of the clinical department should be a number of associates and assistants, men from 25 to 35 years of age, who should devote all or most of their time to clinical work, teaching and research. These men should remain in these positions from five to ten years, receiving promotion from time to time as may be deserved, and during this service should receive a thorough training in their special clinical field, and also in teaching and research. It is from this body of men that teachers for the clinical departments must be developed and recruited. It is not necessary to pay these men very large salaries because the training which they would receive can be properly regarded as compensation of great value.

In addition to the regular teachers, connected with each clinical department, there should be a corps of clinical teachers and extramural teachers. These men should receive no salaries, or at most only nominal salaries. They should be men who occupy outside hospital and dispensary positions, who can offer elective courses and give to the student body the benefit of their clinical material and experience. Not infrequently most desirable teachers in special lines will be developed from these men. Incidentally, the college could in this way affiliate with itself the better hospitals and dispensaries and obtain a large amount of clinical material, and also secure the services and support of the high-grade scientific clinicians in the community.

GRADUATE MEDICAL INSTRUCTION

Much credit is due to Dr. Horace D. Arnold for the excellent work he has done as chairman of the Council's special Committee on Graduate Medical Instruction. A digest of the preliminary report of this committee was presented a year ago, in the report to this body. During the past year an inspection was made of the postgraduate medical schools of the country and a careful study was made of the problems of graduate medical education. A brief abstract of the last report of the committee is as follows:

A distinction should be made between the advanced courses, which may properly be called "graduate courses," and the more elementary courses, constituting the bulk of the work especially designed for practitioners, which may well be designated as "practitioners' courses."

The following definitions for use in connection with the instruction of graduates in medicine are recommended for general acceptance:

1. *An Undergraduate School* is understood to mean a regular medical school, since the instruction it gives leads to graduation in medicine.

2. *An Undergraduate Course* is one required for the degree of M.D.

3. *A Graduate Course* is one more advanced than an undergraduate course.

4. *A Practitioner's Course* is one of undergraduate grade but intended for practitioners.

5. *A Graduate Department, or a Graduate School,* is one organized to give graduate courses. Such a school may also give practitioners' courses.

6. *A Practitioners' Department, or a Practitioners' School,* is one organized to give courses for practitioners. Only in exceptional instances should such a school attempt to give graduate courses.

7. *A Certificate* means a document which resembles a diploma in form, is suitable for display, and may impress the public.

The instruction of graduates in medicine is essential in order to furnish better doctors to the public. By raising the standards of medical schools, the proper training of medical students is practically settled. Much remains to be done, however, to improve the training of physicians who are already in practice, and enable them to keep pace with progress in medical knowledge.

No medical school should attempt to provide graduate teaching unless its undergraduate course is satisfactory developed. Consequently schools in Classes B and C should not attempt to teach graduates. Even Class A schools should not attempt to teach graduates unless the instruction for their undergraduates is in a complete state of development. The standards for the instruction of graduates should be just as high as those for the instruction of undergraduates, no matter whether the courses are advanced or elementary.

During the past year the committee inspected the more important "postgraduate" schools of the country—independent schools organized for the purpose of teaching medical graduates. As a class the independent "postgraduate" schools are inferior and unsatisfactory. Few of them can stand comparison with even fairly good medical schools. Not only is the instruction poor and the equipment inadequate in many of these schools, but some are clearly commercial in type. They cannot be depended on for adequate instruction for graduates. Good medical schools, therefore, which have adequate facilities, should undertake this form of instruction. Good medical schools can readily secure the services of competent teachers, if the regular force is unable to undertake the teaching of graduates. They already have the necessary equipment, or they are in position to secure such equipment, if more is needed. It would mean a needless waste of money for the "postgraduate" schools as a body to attempt to secure the means which would enable them to secure an equipment adequate to meet the demands of the many graduates who wish instruction. Herein lies one of the strongest arguments why medical schools should undertake this work.

There are five classes of graduates who need opportunity for further study, depending on their desire (1) to undertake research; (2) to enter some specialty; (3) to take other advanced instruction; (4) to take the latter improved studies in the medical school, and (5) to make up deficiencies in previous medical training.

1. *Research.*—Abundant opportunities for research, sufficient to meet the needs of those who wish such work, are already available in the medical schools of this country.

2. *Training for Specialists.*—There is an urgent necessity of establishing standards for specialists. Notning brings greater discredit to the profession than the blunders of self-styled specialists who have had an inadequate training. The training of specialists should involve a systematic course of instruction of at least one year, followed by a year or more of supervised clinical experience. This involves the possession of exceptionally good clinical facilities. It is clear that only the better university medical schools which have exceptionally good opportunities should attempt the training of specialists. Such a course is worthy of some degree in medicine higher than M.D., and such degrees should be granted only by universities.

3. *Advanced Instruction Other Than (1) or (2).*—Several of the best medical schools are beginning to give serious consideration to the needs of graduates who seek opportunities for keeping abreast of the advances in medical knowledge and practice. Instruction of this type can be given only with the teachers and equipment of the best schools; therefore, it is a duty these schools owe to the community to seriously consider how far they can meet the demand for such courses. They should not hesitate to take up graduate teaching because they could not do so on an extensive scale. It is the quality of the work that is important, not the quantity. It is creditable for a school to offer but a single course if it is a good one and is useful to the profession. On the other hand, it is discreditable for a good school to try to cover more ground than it can do well, for the sake of making a showing. Only when this form of instruction is undertaken on an extensive scale is it desirable to establish a separate department or school. Many schools could offer at least a few graduate courses, at some time in the year, which would be attractive to physicians who wish advanced instruction. There is an advantage in having centers for teaching graduates distributed over the country, for the greater convenience of those physicians who are limited as to time or money.

4. *Admission of Graduates to Undergraduate Courses.*—Graduates in Classes 4 and 5, those who have become "rusty" and wish to "brush up," and the graduates of poor schools who have had an inadequate training, constitute the bulk of those who seek further instruction. They do not need advanced courses, and, as a rule, are not qualified to take them. The admission of these graduates to undergraduate exercises is per-

amiable, provided it does not interfere with the regular teaching. As a rule, undergraduate courses require more time than physicians can spare from their professional work. Specially organized practitioners' courses are, therefore, desirable.

Hitherto such courses have been left for the "postgraduate" schools, which vary from good to very bad, and as a class are inferior and unsatisfactory. They could be made satisfactory only through extensive improvements, and the funds required for such improvements would be expended to better advantage in strengthening the regular medical schools. Therefore, it is unwise to leave the giving of practitioners' courses to these independent schools. The better medical schools, as far as they can, should provide practitioners' courses, as a public service. The better the school, the greater the advantage for the public.

"Postgraduate" schools do not merit universal condemnation, even if, as a class, they are unsatisfactory. They deserve credit because they have attempted to meet the demand of graduates for further instruction. Hitherto they have been successful because they have had to compete only with poorer schools of the same class. If the good medical schools enter this field of teaching, the "postgraduate" schools will face a crisis, which is accentuated by the question of standards for such teaching. Either they must come up to the standards of good medical schools, or they will lose their best teachers, many of whom have become associated with "postgraduate" schools because these were the only ones where such teaching could be done. Now that the question of standards is raised, these men will be in demand for the good medical schools which undertake this work. The problem of the independent "postgraduate" schools will take care of itself if the good medical schools undertake this kind of teaching. The better "postgraduate" schools will be forced to join the regular schools, and the poorer ones will find it unprofitable to continue. The number of physicians who will patronize poor schools of this type when better instruction is offered is very limited.

Medical schools should understand, however, that courses for practitioners must often be different from the regular undergraduate courses. Practitioners, as a rule, can leave their practice for only a limited time. Courses should be arranged that may be completed in a month or six weeks. This means a greater subdivision and a greater variety of subjects than in undergraduate studies; it means also that the work should be concentrated and practical. Courses should be so arranged that the graduate can occupy himself with studies along certain narrow lines throughout the day. If courses cannot be offered throughout the year, they should be concentrated so that there will be definite periods when the practitioner can have a wide range of choice.

Admission Requirements.—There can be no uniform admission requirements of an educational character. Medical graduates need courses which range from the elementary to the most advanced. For the benefit of the public, even the most poorly trained practitioner, if he is legally entitled to practice medicine, should have an opportunity to improve his medical knowledge. He should, of course, be admitted only to such courses as he is qualified to take. It is desirable that graduates from poor schools who are not registered should not be able to coach up in these courses and learn just enough to pass the state licensing boards.

Certificates.—To offset the evils attendant on the loose regulations about granting certificates, it is recommended that the minimum time requirement for the granting of a certificate be four months of all day work, taken consecutively; that it should be granted only for a systematic course, approved by the school, in which attendance and work have been satisfactory; and that the student must pass an examination based on this course of study. A school may issue for shorter courses an official statement of the student's attendance as to the character of his work, but the form must be such that it does not resemble a diploma.

The Council will not at present attempt to divide all the independent schools into those which are approved and those which are not approved. Any such school, however, may apply for the approval of the Council. Such approval may be granted if the school meets the requirements as to admission and certificates, and if, in all departments in which instruction is given, it comes up to the standard of a Class A school.

RECOMMENDATIONS OF THE COMMITTEE

The committee makes the following special recommendations, which have been endorsed by the Council:

(*a*) It is recommended that no graduate medical school be approved by the Council which accepts, as students, physicians who are not licensed practitioners, unless they are graduates of medical schools rated in Class A.

(*b*) It is recommended that certificates, diplomalike in character, be not granted for less than four months of all day work, taken consecutively; that they be granted only for a systematic course, approved by the school, in which attendance and work have been satisfactory; that the student must pass an examination based on this course of study, and that only such graduate medical schools be approved which exact these requirements. (A school may issue for shorter courses an official statement as to the student's attendance or the character of his work, but the form must be such that it does not resemble a diploma.)

(*c*) There can be no fixed entrance requirements for graduate medical schools, there is no definite curriculum or time requirement, and it is not possible to classify graduate medical schools as has been done with the undergraduate schools. Therefore, it is recommended that the Council's approval be on the basis of the content and character of the courses offered, and that in deciding on the approval of courses, the equipment of the school and the qualifications of the instructor be taken into account.

(*d*) It is recommended that the Council be empowered, in its discretion, to give its approval to research courses, to systematic courses for the training of specialists, and to other graduate courses where given in Class A medical schools. (This does not mean that all such courses in Class A medical schools will be approved, but that no such courses will be approved if given in medical schools graded lower than Class A.)

(*e*) It is recommended that in determining the standard of graduate departments of medical schools, or independent schools giving instruction to graduates, the Council be guided by the following outline, grading the various institutions on a civil service basis, in a manner similar to that employed for undergraduate medical schools:

1. Any evidence obtainable showing the character of the training furnished by the graduate medical school.
2. The observance by the graduate medical school of the rules herein set forth regarding the admission of students.
3. Supervision of the students' work; character of the records; observance of the rules herein set forth regarding the granting of certificates.
4. Graduate school buildings or quarters; light, heat, ventilation, cleanliness.
5. Laboratory facilities and instruction.
6. Dispensary facilities and instruction.
7. Hospital facilities and instruction, maternity work, necropsies, specialties.
8. Faculty, number and qualifications of trained teachers, full-time instructors and assistants, organization, research work, etc.
9. Extent to which the school is conducted for teaching rather than for the profit of the faculty directly or indirectly.
10. Possession and use made of libraries, museums, charts, stereopticons, etc.

The Council does not deem it advisable to attempt at present to divide the independent schools into those which are approved and those which are not approved. Any graduate school may apply for the approval of the Council, however, which may be granted if the school meets the requirements as herein set forth, and if, in all departments in which instruction is given, it comes up to the standard of a Class A school.

The Council shall collect data about schools which offer courses for graduates. It may publish such information as seems desirable about courses which meet approval in accordance with the foregoing regulations.

CONCLUSION

It is seen, therefore, that at the beginning of the second decade of the Council's work, marked progress in medical education continues to be made. Through the collection and distribution of information by the Council, the weak places which continue to exist in our system of medical education are well known, and efforts are being directed toward their improvement.

In regard to medical colleges, the total number now approaches more nearly the normal supply for this country, but there is still much room for internal developments.

In clinical teaching, much improvement will be made by the establishing of closer relationships between hospitals and medical schools—relationships which even now are being rapidly brought about. It is now fairly well recognized that, from every point of view, the best hospitals are those which hold a close teaching relationship with high-grade medical schools.

A further investigation of hospitals is highly important, not only in the interest of medical education and to enable the Council to prepare a list of those in position to provide acceptable internships for medical graduates, but also—and even more important—to lead to the publishing of such information as will result in improving hospitals generally, and lead to a greater efficiency in hospital management.

In medical licensure, although the obtaining of legislation is slow—and properly so, since it is the more certain to be constructive—nevertheless much progress is being made. Legislators are beginning to realize that the first essential in

any effective regulation of the practice of the healing art is to provide that the practitioner has obtained an adequate training, regardless of the "system" or "method" followed.

In graduate medical instruction, only a bare beginning has been made, and there is promise of a rapid development which should be under the direction and with the assistance of the Council.

It is believed that along all lines, the work is being conducted in a manner which will bring about the most rapid and lasting improvements in medical education in the United States.

Respectfully submitted.

ARTHUR DEAN BEVAN, Chairman,
GEORGE DOCK,
W. D. HAGGARD,
JAMES W. HOLLAND,
HORACE D. ARNOLD,
N. P. COLWELL, Secretary,
Council on Medical Education.

On motion, duly seconded, the report was referred to the Reference Committee on Medical Education.

Report of the Committee on Red Cross Medical Work

Dr. George M. Kober, District of Columbia, Chairman, read the report of the Committee on Red Cross Medical Work, which was referred to the Reference Committee on Reports of Officers.

The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

A Committee on Red Cross Medical Work was created at the 1912 session in accordance with Section 3 of Chapter VIII of the By-Laws.

The object of this committee was to stimulate in every county medical society the creation of a Committee on "Red Cross Medical Work" so as to provide a body of representative physicians of approved qualification to direct or participate in medical work, carried on by the Red Cross in different localities in times of war or emergencies, and to advise with the representatives of that society in handling medical and sanitary problems incident to such an occurrence. The certification of physicians by county committees is accepted as ample evidence of the physical, moral and professional qualifications of the gentlemen recommended for appointment in the Red Cross service.

NUMBER OF COUNTY MEDICAL SOCIETIES BY STATES WHO HAVE APPOINTED COMMITTEES ON RED CROSS MEDICAL WORK

Alabama	7	Montana	4
Arizona	5	Nebraska	12
Arkansas	11	Nevada	1
California	14	New Hampshire	5
Colorado	7	New Jersey	5
Connecticut	6	New Mexico	5
Delaware	1	New York	24
District of Columbia	1	North Carolina	6
Florida	6	North Dakota	5
Georgia	11	Ohio	28
Idaho	1	Oklahoma	18
Illinois	39	Oregon	4
Indiana	33	Pennsylvania	30
Iowa	26	Rhode Island	3
Kansas	12	South Carolina	6
Kentucky	13	South Dakota	4
Louisiana	6	Tennessee	12
Maine	5	Texas	33
Maryland	1	Utah	2
Massachusetts	13	Vermont	2
Michigan	13	Virginia	9
Minnesota	9	Washington	5
Mississippi	11	West Virginia	6
Missouri	21	Wisconsin	9

It is gratifying to report that during the past year 296 county medical societies have created committees on Red Cross medical work so that on May 1, 1915, not less than 510 committees, composed of 2,550 representative men in forty-eight states, covering nearly all parts of the country, are available to render reliable advice or assistance in any of the activities of the American Red Cross.

Major Robert U. Patterson, Medical Corps, U. S. Army, and Chief of the Bureau of Medical Service of the American Red Cross, reports that during the present war in Europe many of these committees have been called on to report on the qualifications of physicians and surgeons offering to serve the Red Cross in Europe. The recommendations have been invaluable, as it is highly important that reputable men only be chosen in order to protect the American Red Cross and the reputation of the medical profession of the United States, whom they represent abroad.

Respectfully submitted,

GEORGE M. KOBER, Chairman,
WILLIAM J. LYSTER,
Major, Medical Corps, U. S. Army,
R. C. HOLCOMB,
Surgeon, U. S. Navy.

APPENDIX A

To the Secretary, County Medical Society:

DEAR SIR:—The undersigned have been constituted a committee by the President of the American Medical Association to cooperate with the American Red Cross, in the matter of medical work.

The committee feels that a great deal of substantial good will come to all communities by providing a body of representative physicians of approved qualifications to direct or participate in medical work carried on by the Red Cross in different localities in times of emergencies and to advise with the representatives of that society on questions of medical policy and procedure. Besides its activity in emergency relief work, the Red Cross is engaged in an educational campaign for the mitigation of human suffering and the saving of lives. So far it has extended this movement only to the teaching of prevention of accidents and first aid to the injured, but it is hoped in future that it shall include popular instruction in the prevention of disease. These medical committees are not in any way bound to this educational work of the Red Cross, but members of the committees who may be interested are invited to correspond with the First Aid Department of the Red Cross.

In the opinion of this committee, the plan may be properly considered under the following headings:

1. OBJECT. Primarily this service is designed to meet local emergencies when conditions of disaster are such as to call for the intervention of the Red Cross. When exigencies come about in any community the Red Cross would be glad to feel that it might call on carefully selected physicians in that community to lend their aid in the medical work incident to the situation.

2. ORGANIZATION. It is desired to have in every county a central committee of five physicians, two of whom shall be the president and secretary of the county medical society, *ex officio*. The president of the county medical society shall select the other three members, preferably from the list of councilors or of the executive committee. This committee shall be designated the "Committee on Red Cross Medical Work." The names and residences of the members, immediately after organization, should be reported to the chairman of the American Medical Association committee. In case of disaster, requiring relief action by the Red Cross, these county committees will be called on to nominate qualified medical men in their respective counties for Red Cross service. The committees will also serve in an advisory medical capacity to the Red Cross in time of disaster and in other lines of Red Cross activity as indicated in a preceding paragraph.

3. QUALIFICATIONS. The certification of physicians by county committees will be accepted as ample evidence of the physical, moral and professional qualifications of the gentlemen recommended for appointment. It may be pertinent to state that service in time of disaster may entail severe physical effort, and physical fitness of appointees to perform hard work is, therefore, important.

4. COMPENSATION. In some instances the Red Cross may require the services of physicians at a distance from their places of residence and for varying periods. Under these conditions the Red Cross will be prepared to pay traveling expenses and a moderate honorarium to be agreed on between the physicians and the National Director of the Red Cross.

It will be obvious to you that the arrangement here proposed is primarily intended to provide for emergencies which may suddenly arise in any community or, on the other hand, may happily never occur. Thus it may be that the committee which we are inviting you to create may never be called

into action, while, on the other hand, it may have occasion to perform a very great public service. Your cooperation in the completion of this plan at as early a date as convenient will be appreciated.

Please address all communications bearing upon the contents of this letter to the chairman, Doctor George M. Kober, c/o Major Robert U. Patterson, the American Red Cross, 1624 H Street N.W., Washington, D. C.

Very respectfully,
GEORGE M. KOBER, Chairman,
WILLIAM J. LYSTER,
Major, Medical Corps, U. S. Army,
R. C. HOLCOMB,
Surgeon, U. S. Navy.

At a meeting of the Executive Committee of the American National Red Cross held in Washington, D. C., Feb. 14, 1913, the foregoing plan of cooperation between the medical profession and the Red Cross was unanimously approved.

GEORGE W. DAVIS,
CHARLES L. MAGEE, Major General, U. S. A., retired,
Secretary. Chairman, Central Committee.

The President announced the Committee on Reapportionment as follows:

Robert M. Funkhouser, Missouri; A. B. Walker, Ohio, and Lyman Asa Jones, Massachusetts, in addition to the President and Secretary.

On motion, which was duly seconded, the House of Delegates adjourned until 2 p. m.

Second Meeting—Monday Afternoon, June 21

The House of Delegates reconvened at 2 p. m., and was called to order by the President.

The minutes of the previous meeting were read and approved.

Dr. E. J. McKnight, Connecticut, Chairman, presented a supplementary report from the Committee on Credentials, stating fifty-one additional delegates had qualified.

Report of the Committee on Scientific Research

Under reports of Special Committees, the Committee on Scientific Research was called, and in the absence of the Chairman, Dr. Ludvig Hektoen, Illinois, it was moved that this report be received as printed in the handbook for the House of Delegates, and be referred to the Reference Committee on Reports of Officers.

Seconded and carried.

The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

The Committee on Scientific Research begs leave to submit the following report:

Since the last meeting of the House of Delegates, the balance to the credit of the committee has been exhausted in the payment of pending grants in full as follows:

Grant 34, $200, Gerald B. Webb, Colorado Springs, for work on immunity in tuberculosis.

Grant 35, $250, A. L. Prince, Yale University, New Haven, for work on the methods of determining the efficiency of the heart.

Grant 36, $200, E. R. Le Count, Chicago, for study of syphilitic leptomeningitis.

Grant 37, $400, William DeB. MacNider, Chapel Hill, N. C., for work on the toxicity of anesthetics in nephritis.

Grant 38, $350, C. C. Bass, New Orleans, for work on pathogenic protozoa.

The work supported by these grants has been finished, or practically finished, and the results published. The committee regrets that it has no funds for further grants.

Respectfully submitted,
LUDVIG HEKTOEN, Chairman,
F. G. NOVY,
C. C. BASS.

The report of the Committee on Scientific Exhibit was called.

Dr. Frank B. Wynn, Indiana, Chairman, stated that the question of exhibit this year was a double one. At the present time the committee was in a chaotic state in endeavoring to secure scientific and conservation health exhibits, so that it was impossible to make a report at this time. He therefore requested that the report be postponed until the session of Thursday.

The committee had only this recommendation to make, that the Committee on Awards be selected early to study the different exhibits and pass on their merits. He, therefore, suggested that a committee of three be appointed by the President at this session.

The President stated that this preliminary report would be accepted, and when the full report was made it would be referred to the proper committee.

Report of the Committee on the Nomenclature and Classification of Diseases

In the absence of the chairman of the Committee on Nomenclature and Classification of Diseases, Dr. Cressy L. Wilbur, New York, it was moved that this report be accepted as printed in the handbook, and referred to the Reference Committee on Reports of Officers.

Seconded and carried.

The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

For various reasons it has not been possible to accomplish much in the way of definitive work along the lines previously planned. Owing, perhaps, to the interruption resulting from the great war now in progress, the expected cooperation with the Committee of the Royal College of Physicians of London, now engaged on the fourth decennial revision of the English nomenclature, has not materialized. It will be well to await the results of this revision, which may be found to be an excellent system for adoption by American physicians, with such slight changes as may be necessary for this country. Moreover, it will not be long before the third decennial revision of the International List of Causes of Death and Disability, which is set for the year 1919, will be at hand. The second revision, now in use, which was to be the basis of the work of this committee, has proved difficult in its adaptation to practical requirements in some respects; see the Nomenclatures of Bellevue and Allied Hospitals and of the Massachusetts General Hospital. Other modifications are suggested by its results, as shown in recent reports of the Registrar-General. Studies, like those of Dr. Cabot and Dr. Emerson with respect to the uncertainty of clinical diagnoses when not confirmed by necropsies, point to the necessity of revising our statistical classifications so that prominence will be given chiefly to the more definite and certain returns.

While the need of a nomenclature of diseases should not be lost sight of, it may be expedient to discharge the committee for the present, with a view to the taking up of the whole subject afresh, by the aid of the data more particularly from English sources not now available, after an intermission of a year or two and in time for the work to be of service in connection with the next revision of the International List of Diseases, which is the official standard for statistical purposes in England, France, the United States and many other countries.

Respectfully submitted,
CRESSY L. WILBUR, Chairman.

Report of the Committee on Anesthesia

In the absence of the chairman of the Committee on Anesthesia, Dr. W. D. Gatch, Indiana, it was moved that this report be accepted as printed in the handbook and referred to the Reference Committee on Reports of Officers.

Seconded and carried.

The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

This committee has arranged with THE JOURNAL of the Association for the publication of monographs on Intratracheal Insufflation, by Dr. Samuel Meltzer, and on the Theory of Anesthesia, by Dr. Evarts Graham. The plan is to sell these at a price which will just cover the cost of their publication. They will appear as soon as the work of THE JOURNAL will permit. These monographs give work of fundamental importance in anesthesia, and represent a great amount of original research by their authors.

It is planned to bring out similar monographs from time to time. The hope of the committee is that men of sufficient training and ability to do really valuable work in anesthesia may be stimulated to do the same by the inducement of having their results published in full by the American Medical Association.

The committee has decided that this plan is best adapted to increase our knowledge of anesthesia.

Respectfully submitted,

W. D. GATCH, Chairman.
REID HUNT.
THOMAS S. CULLEN.
JAMES T. GWATHMEY.
EVARTS GRAHAM.

Report of the Committee on Sections and Section Work

Dr. Hugh Cabot, Massachusetts, Chairman, read the report of the Committee on Sections and Section Work. The report follows:

To the Members of the House of Delegates of the American Medical Association:

Your Committee has assumed it to be its duty to consider the present division of the Scientific Assembly into Sections and the working of such division, with a view to improving the arrangement if possible.

The division of the work into sections was clearly intended to subdivide the subject in such a way as to make the work of the Association more effective without allowing it to become so highly specialized as to interfere with its value to the general practitioner. The membership of the Association has consisted, and probably always will consist, chiefly of general practitioners; and the importance of making the work of the Scientific Assembly of the greatest possible value to this, the majority of the membership, must not be lost sight of. Should too high a degree of specialization occur, the great educational function of the Association might be impaired or lost, with the result that it might become simply a gathering place for groups of highly special workers. On the other hand, since the Association comprehends among its members a vast majority of the most highly trained medical scientists in the country, it is important to provide opportunity for these men to meet each other in discussion and to share with each other work of so highly special a nature that it is of necessity beyond the grasp of many members of the Association.

We believe it to be clear that the wise division into Sections must comprehend these two important functions of the Association.

The method pursued by your committee in obtaining the widest possible knowledge of conditions was first by direct interview with many members of the Association who have been closely associated with the scientific work, and second, the sending to many past and present officers of sections a list of questions tending to bring out their views on possible methods of redivision. We have on the whole been disappointed by the results obtained by the questions sent to officers of sections, since only a comparatively small number seemed willing to express opinions and many regarded the question as one on which they could express no opinion as they were not familiar with the work of any section other than their own. We did, however, obtain clear evidence on some points.

In the first place, it appeared that there were some very strong sections which were not generally recognized as such by the Association. Of these the most striking were the Sections on Ophthalmology and on Laryngology, Otology and Rhinology, which are among the best organized and most valuable in the Association.

It further appeared that there were some very weak sections, inasmuch as the attendance was small, the number of papers was rarely up to the maximum and the success of their meetings depended very largely upon the rather accidental qualifications of the section officers. The weakest of the sections appeared to be that on Stomatology and among others in this group were those on Hospitals, and Pharmacology and Therapeutics.

From personal discussions with the members above referred to, it further appeared that there were some sections which, though their programs were full, could not properly be regarded as using their time to the best advantage because the papers were obtained with difficulty and were hardly up to the standard properly to be required by the Association. In contrast to this there were certain sections, particularly those on Practice of Medicine and on Surgery, General and Abdominal, which could use considerably more time to advantage and were obliged yearly to refuse admission to their program to papers of a very high grade of excellence.

Particularly from the answers obtained from the officers of sections it appeared that there was a lack of the intelligent continuous cooperation between sections on allied subjects, which must be regarded as essential to the best development of the Scientific Assembly, a condition which can hardly be avoided since this cooperation is entirely in the hands of officers elected at short intervals with incomplete knowledge of past relations between various sections and occasionally influenced by temporary personal considerations. This lack of cooperation, coupled with the lack of any machinery likely to produce it, seems to us on the whole the most striking weakness of the present arrangement.

Coming now to more specific consideration of the division into sections, the following points are striking:

In the group of what might be called the medical sciences, that is to say anatomy, physiology, pathology, bacteriology and pharmacology, it appears that some of these subjects have been strikingly neglected while others have been related together in a faulty way. Thus the association of pathology and physiology in one section seems to be based on no inherent similarity. There is no section on anatomy; and while therapeutics is dealt with in every section, certain undefined portions of the subject are linked with pharmacology.

It is further apparent that while obstetrics is one of the most important divisions of medical practice from the point of view of the public health, it is most unsatisfactorily represented in the Section on Obstetrics, Gynecology and Abdominal Surgery, and section officers have had the greatest difficulty in obtaining papers on this subject.

Among the so-called specialties represented by special sections, there is the greatest unevenness, and the lack of stability of certain specialties has been very striking as compared with others. Thus the Sections on Ophthalmology and on Laryngology, Otology and Rhinology have maintained a very even and high degree of excellence for many years, while the Section on Obstetrics, Gynecology and Abdominal Surgery found it difficult to fill its program until it annexed the field of abdominal surgery.

This but serves to call attention to the notorious fact that the division of the field of medicine into specialties, through an always increasing tendency, advances at no definite or specified rate, and that subdivisions which appear a proper field for special work may after the lapse of years cease to be so considered. From this it necessarily follows that a hard and fast division of the Scientific Assembly is bound to be unsatisfactory, and that provision must be made for changing the divisions through the medium of some body having the matter more continuously under consideration than the annual Reference Committee of the House of Delegates.

With a view to remedying the difficulties which we have pointed out, your committee has thought it best to make two general recommendations:

1. The division of the sections into four general groups in order to correlate their work. Within these groups some consolidation and some rearrangement of sections should be made.

2. The creation of a standing committee or council, whose duty it should be to assist section officers to help in the development of continuous policies and to advise the House of Delegates in regard to the creation of new sections or the consolidation of old ones.

Division of the sections into groups:

A. The Medical Sciences

This group, consisting of anatomy, physiology, pathology, bacteriology and pharmacology, constitutes the basis of medical practice. They are developed largely in the laboratory, and therefore tend to produce a highly specialized group of workers. Their contribution to the scientific sessions is therefore a dual one, and papers on these subjects should be presented:

(*a*) In the general and special sections in order that the basis of the work of these sections may not be lost sight of, and

(*b*) An opportunity should be given for these highly specialized workers to meet under the auspices of the Association and discuss their problems of special interest.

The grouping heretofore followed in these subjects seems to us illogical; as we have already pointed out, physiology and pathology have no necessary relationship, and anatomy does not appear at all. We therefore advise the creation of five separate sections, having one session each, and therefore taking the time at present allotted to one section. This would, we believe, give sufficient opportunity for the presentation of special papers and tend to force the papers of more general interest into the other sections, where they more properly belong. It might be desirable to have one chairman for this group and five secretaries, whose business it should be to arrange the program.

B. Medicine

In this group are placed the present Sections on Practice of Medicine, Diseases of Children, Nervous and Mental Diseases, Preventive Medicine and Public Health, and Hospitals. The correlation between these sections seems to us clear, and among them there should be more cooperation, resulting in more even apportionment of the program and more joint sessions. The present Section on Hospitals, though highly important, has not created a sufficient demand to entitle it to a place as a full section, and it is therefore grouped with the Section on Preventive Medicine and Public Health. The number of sessions to be allotted to these four sections should, we think, be as follows:

Practice of Medicine and Diseases of Children, each five sessions, which is the present allowance. To Mental and Nervous Diseases, and Preventive Medicine, Public Health, and Hospitals, each four sessions, which is a diminution of one session each from the present allowance.

This may be deemed a hardship, but appears only to hold an even balance between the importance of the subjects at the present time. Some of the papers now presented before the latter two sections clearly belong in the Section on the Practice of Medicine.

C. Surgery

In this group we have placed Surgery, General and Abdominal; Obstetrics, Gynecology and Abdominal Surgery; Genito-Urinary Diseases, and Orthopedic Surgery. To the first two of these sections we have allotted their present number of sessions, namely, five. To the Sections on Genito-Urinary Diseases and Orthopedic Surgery we have assigned four sessions each, a reduction of one from the present allotment. This suggestion is made for precisely the same reason that it was made in the preceding paragraph, because we believe that these special departments of general surgery should be more closely linked to the general section and should consider in their own sessions only highly special questions, whereas the questions of general interest should remain in the general section.

Much discussion has arisen, and your committee has gone at considerable length into the question of the apportionment of abdominal surgery between the Sections on Surgery, General and Abdominal, and that on Obstetrics, Gynecology and Abdominal Surgery. The facts appear to us to be these:

The program of the Section on Surgery, General and Abdominal, is habitually overcrowded, particularly with papers dealing with abdominal surgery; and, as a result of this overcrowding, many papers of a degree of excellence clearly entitling them to consideration were necessarily refused. In a word, the Section on Surgery, General and Abdominal, has more than it can attend to. The Section on Obstetrics, Gynecology and Abdominal Surgery has for a considerable time, and of necessity, been receiving papers on abdominal surgery. The work of the gynecologist, at first confined to the pelvis, has necessarily spread into a broader field. If this section is required to confine itself strictly to papers on obstetric and gynecologic subjects, the program will be filled with difficulty and papers not up to the standard properly required will have to be taken. In a word, on the basis of strict construction, this section has less than it can do. The logic of the situation, therefore, appears to demand that papers on abdominal surgery be received both in the Section on Surgery, General and Abdominal, and in that of Obstetrics, Gynecology and Abdominal Surgery. In this way the pressure on the former section will be diminished, and the lack of material in the latter section will be remedied.

It is further obvious that the more frequent employment of joint sessions is here particularly desirable. If the grouping of all these surgical specialties is to be maintained, a high degree of cooperation will be necessary, a condition which has not obtained in the past.

D. The Specialties

In this group we have placed those sections which are well recognized specialties, and yet are not particularly affiliated either with medicine or surgery. They are the Sections on Ophthalmology, Laryngology, Otology and Rhinology; Dermatology, and a new Section on Stomatology, Gastro-Enterology and Proctology.

To the Sections on Ophthalmology and on Laryngology, Otology and Rhinology we would assign five sessions each, which is their present allowance. To Dermatology we would assign four sessions and an equal amount to the new Section on Stomatology, Gastro-Enterology and Proctology.

It is clear that no change ought to be made in the amount of time allotted to the first two of these sections, since, as we have already pointed out, they are among the best-established and most efficient of the Scientific Assembly.

It will probably be felt that the reduction from five to four in the sessions of the Section on Dermatology is a hardship, but we would call attention to the fact that if the Sections on Practice of Medicine and on Surgery, General and Abdominal, are allowed only five sessions, the Section on Dermatology can hardly lay claim to more than four.

The new section is created in order to help out the very weak Section on Stomatology, while giving recognition to the excellent special work now being done in gastro-enterology and proctology. The creation of such a section must be regarded as experimental, and further experience might make further modification desirable.

In making allowances of time to the various sections, your committee has not been unmindful of the fact that the increase in the number of sections in recent years has been a not inconsiderable burden on the finances of the Association. It has required an increasing number of meeting places and an increasing number of stenographers. Under the former arrangement there were fifteen sections with an allowance of seventy-five sessions. Under the plan which we propose, there would be thirteen sections if we group

together into one section the group on medical sciences. To these sections are allotted fifty-nine sessions, a diminution of sixteen sessions from the former classification, and therefore a considerable reduction of expense. Such a reduction can be justified only if it appears that the balance of the work is at least maintained if not improved; but we believe that with this schedule, the balance will be considerably better and that at least no hardship will result.

A STANDING COMMITTEE OR COUNCIL ON SECTION WORK

It will, we think, be generally recognized that the questions coming yearly to the House of Delegates concerning the sections, whether in regard to new sections or to disputed questions between existing sections, have necessarily been dealt with by the House of Delegates with an insufficient knowledge of the facts. Some reference committees have been very willing to create new sections, while others have been entirely unwilling to take similar action on what appeared to be equally cogent reasons. The recent controversy between the Sections on Surgery, General and Abdominal, and on Obstetrics, Gynecology and Abdominal Surgery, is thought by many to have been dealt with by the House on insufficient knowledge; but more important than this is the obvious fact that the development of the scientific work of the Association has showed a striking lack of cooperation between sections dealing with somewhat similar subjects. It has even been suggested that as time goes on, medical and surgical specialties tend to withdraw more and more from the parent section to their mutual disadvantage. Our study of the question has convinced us that the best development of the scientific work requires the creation of some body having continuity of service:

1. To help cooperation between sections by having a broader and more long distance view of the problems than can be expected of section officers.

2. To settle questions of policy when difference of opinion arises between section officers.

3. To stimulate the development of weak sections.

4. To consider at first hand applications for new sections or for changes in existing sections, and to report to the House of Delegates.

Such a committee or council would not in any way interfere with section officers in their conduct and management of their sections, but could be of great service along broader lines than these officers can ordinarily find time to consider. Such a council should, we think, consist of five members, one member to represent in a broad way each of the four general divisions of the Scientific Assembly, and the fifth member should be the secretary of the American Medical Association ex-officio. The four members should be elected by the House of Delegates on nomination by the president, one each year to serve for four years.

We append a table (page 217) showing the plan of division of Sections.

Respectfully submitted,

HUGH CABOT, Chairman,
WESLEY T. MULLIGAN,
F. C. WARNSHUIS,
MORGAN SMITH,
FLOYD W. MCREA.

In connection with the report the committee offered the following amendments to the By-Laws:

Chapter VII—Section 3, Page 15—add Council on Sections and Section Work.

Section 9, Page 19—add new section, Council on Sections and Section Work.

The Council on Sections and Section Work shall consist of four Fellows representing the four main divisions of the Scientific Assembly—medical sciences, medicine, surgery, the specialties, and the Secretary of the American Medical Association ex officio. One member of the Council shall be elected to serve one year, one to serve two years, one three years and one four years. Thereafter, one shall be elected each year to serve four years. The Council shall organize and elect its own officers.

The function of the Council on Sections and Section Work shall be:

1—To secure cooperation between the sections.
2—To pass upon questions of policy in relation to section work.
3—To stimulate the development of the Sections.
4—To consider at first hand applications for new Sections, or for changes in existing Sections, and to report to the House of Delegates.

Chapter XI, Page 27—Sections.

Section 1—Titles of Sections for Scientific Work—The Scientific Assembly of the A. M. A. shall be divided into the following Sections:

MEDICAL SCIENCES	Sessions
A—Anatomy	1
B—Physiology	1
C—Pathology	1
D—Bacteriology	1
E—Pharmacology	1
MEDICINE	
2—Practice of Medicine	5
3—Diseases of Children	5
4—Mental and Nervous Diseases	4
5—Preventive Medicine, Public Health and Hospitals	4
SURGERY	
6—General Surgery	5
7—Obstetrics and Gynecology	5
8—Genito-Urinary Surgery	4
9—Orthopedics	4
SPECIALTIES	
10—Ophthalmology	5
11—Laryngology, Otology and Rhinology	5
12—Dermatology	4
13—Stomatology, Gastro-Enterology and Proctology	4

Section 12, Page 30, number of papers on program.

The maximum number of papers on the program of any Section shall be thirty. Sections having four sessions shall be limited to twenty-four papers, and Sections having one session shall be limited to six papers.

After presenting the above amendments to the By-Laws, Dr. Cabot moved that they be referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Seconded and carried.

The President appointed as the Committee on Awards, Dr. Hugh Cabot, Massachusetts; Dr. E. W. Haass, Michigan, and Dr. V. H. Vecki, California.

Dr. L. H. McKinnie, Colorado, was appointed a member of the Reference Committee on Legislation and Political Action.

On motion, which was duly seconded, the House of Delegates adjourned until 2 p. m., Tuesday.

Third Meeting—Tuesday Afternoon, June 22

The House of Delegates met and was called to order at 2 p. m. by the President, Dr. William L. Rodman, Philadelphia.

On taking the chair, President Rodman said:

Before the reading of the minutes, I wish to thank heartily the House of Delegates for making me its presiding officer, and with your assistance I trust things will go along smoothly. I shall, at least, do my best.

The Secretary called the roll and announced a quorum present.

The minutes of the previous meeting were read and approved.

Supplementary Report from Committee on Credentials

Dr. E. J. McKnight, Connecticut, Chairman, presented a supplementary report from the Committee on Credentials, announcing that nine additional members had qualified.

Supplementary Report from Board of Trustees

Dr. William T. Councilman, Chairman, presented a supplementary report from the Board of Trustees as follows:

WHEREAS, The antinarcotic law known as the Harrison Narcotic Law, approved December 17, 1914, is one of the most important public health measures that has been enacted in recent years, and

WHEREAS, The Council on Pharmacy and Chemistry has called attention to the fact that this law is seriously weakened because Section 6 permits the indiscriminate sale and use of narcotics when they are contained in proprietary and stock preparations, and

WHEREAS, This exemption discriminates in favor of the proprietary medicine interests and against the public interest, is contrary to the aims and objects of the law, and is a detriment to the public health and welfare,

Therefore, The Board of Trustees earnestly recommends that the House of Delegates take action at this time to induce the Congress of the United States to amend the said Act by repeal of Section 6, so that the indiscriminate sale of proprietary and other ready made preparations containing narcotics shall not be permitted.

Dr. H. Bert Ellis, California, moved that the House of Delegates express its approval of this resolution and recommendation of the Board of Trustees, and that the House of Delegates authorize the Board of Trustees to take such action in the matter as the board thinks proper.

Seconded and carried.

Report of the Reference Committee on Medical Education

Dr. H. Bert Ellis, Chairman, read the report of the Reference Committee on Medical Education, as follows:

It is recommended that the House of Delegates adopt the report of the Council on Medical Education as a whole, and that they approve of the special recommendation contained in this report regarding the further investigation of hospitals, and also the recommendations in regard to graduate medical instruction.

The changes in the ratings of medical colleges made by the Council on Medical Education during the past year are approved.

The report of the Special Committee on the Reorganization of Clinical Teaching is especially commended.

Respectfully submitted,

H. BERT ELLIS, *Chairman*,
RICHARD C. CABOT,
A. H. LEVINGS,
PERRY BROMBERG.

It was moved that the report be accepted.

Seconded and carried.

Report of the Reference Committee on Reports of Officers

Dr. William H. Arthur, U. S. Army, Chairman, read the report of the Reference Committee on Reports of Officers, as follows:

Your Reference Committee has had referred to it the report of the Secretary, the report of the Board of Trustees, including the report of a Special Committee of the Board of Trustees of the Council on Pharmacy and Chemistry and the addenda appended to the Trustees report including the Treasurer's report and the Auditor's report, the report of the Judicial Council, the report of the Committee on Red Cross Work, together with the reports on the following special committees:

Committee on Scientific Research.

Committee on the Nomenclature and Classification of Diseases.

Committee on Anesthesia.

In reviewing these reports, your Reference Committee finds a number of suggestions, the consideration of which in your committee's opinion, belongs to the Committee on Amendments to the Constitution and By-Laws. We, therefore, present such parts of these several reports to the House of Delegates with the recommendation that they be referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Secretary's Report: We find on the table certain recommendations for Honorary Fellowship in the Association and recommend that this portion of the Secretary's report be referred to the Reference Committee on Sections and Section Work.

The paragraph relating to the resolutions from the Medical Society of the District of Columbia is recommended for reference to the Committee on Constitution and By-Laws as it involves a change in a By-Law.

Trustee's Report.—It is gratifying to note the increasing use of the cards of the Propaganda Department by state and municipal Boards of Health and it is anticipated that their use will soon be nation wide.

Law Suits.—The law suits attendant on the progress of the work of the Propaganda Department indicate that the majority of such suits were instigated solely in the hope of intimidation. The defense of the one remaining suit it is anticipated will be safeguarded by those who have so well disposed of the previous suits against the Association.

It is gratifying to note the increase in circulation of our JOURNAL and we endorse emphatically the methods used by the management as representing the best modern business practice. It is the opinion of your committee that the Trustees should be encouraged to continue the publication of the *Archives of Internal Medicine*, in spite of the fact that it is done at present at a slight financial loss. The high character of this publication makes it a model for medical journals and an inspiration to professional writers.

Your committee commends the efforts of the Trustees in improving the methods of securing advertising material and in standardizing sizes of medical journals. The increase in revenue is sufficient endorsement of the success of the work of the bureau.

The wisdom of the action of the House of Delegates at its last session in establishing a reserve fund is apparent, and the recommendation that this fund be added to yearly and drawn on only by the affirmative vote of seven of the Trustees is endorsed by your committee.

Believing further that advertising in medical journals is the basis for the successful promotion of the trade in certain proprietary medicines, we earnestly advise all members of the medical profession to withhold their support from those journals which advertise proprietary remedies that have not been investigated by and accepted by the Council on Pharmacy and Chemistry.

In reference to the expenditures by the Association, it is difficult to see how these could be curtailed without materially interfering with its work. Especially is this true of Exhibit "B," Schedule 1. It would be very unfortunate if this work should have to be curtailed. It is recommended that the Board of Trustees continue this work and that funds be kept available for this purpose.

All the expenditures have been audited by an expert accountant, and there is no possible criticism as to the very proper and economical expenditure of the funds.

Report of Judicial Council

The carefully prepared and very comprehensive report of the Judicial Committee on the subject of Workmen's Compensation Laws, their effect on the medical profession in Europe, the insurance principles applied, European social accident insurance, compulsory sickness insurance, old age insurance, insurance for pension for widows and orphans, maternity insurance, etc., appears to your committee to embody a very careful consideration of every phase of each of these all important questions; questions which bid fair to be completely revolutionized. It is earnestly recommended that the Board of Trustees be requested to publish the part of the report of the Judicial Council beginning with the Workmen's Compensation Laws to its conclusion.

It is further recommended that the constituent state societies of this Association be urged actively to bring before the members of the county societies these important questions. As the literature on these subjects is not readily accessible to the members of the state and county societies, these masterly reports appear to your committee to constitute a *vade mecum* on these important social economical problems.

Your committee emphatically reiterates every sentiment voiced by the Judicial Council on the subject of commissions on surgical appliances.

The report of the Judicial Council on the subject of medical defense of its members against malpractice suits is concurred in. This question appears clearly to be one for the constituent state and territorial societies rather than the national Association.

Membership in Adjoining States.—This is recommended for reference to the Committee on Constitution and By-Laws.

Procedure in Preferring Charges.—The proposed procedure in preferring charges appears to your committee to be an entirely fair and impartial method of dealing with alleged irregularities. It is recommended for reference to the Committee on Rules and Order of Business.

The action of the Judicial Council on the cases reported on in executive session appears to your committee to be the only logical method of disposing of these cases.

Red Cross.—The report of the Committee on Red Cross Medical Work is recommended for approval, except that it is deemed advisable that its activities be directed through the state associations rather than with the county societies directly.

Scientific Research.—The report of the Committee on Scientific Research is referred to the Board of Trustees. Your committee recommends this for approval.

Nomenclature and Classification of Diseases.—The report of the Committee on the Nomenclature and Classification of Diseases is recommended for approval. Your committee wishes to express the highest appreciation of the valuable work performed by this committee, and concurs in the recommendation that the committee be discontinued for the present.

Anesthesia.—The report of the Committee on Anesthesia is recommended for reference to the Board of Trustees with the suggestion that the work of this committee be carried on by the Committee on Scientific Research.

WM. H. ARTHUR,
A. R. MITCHELL,
F. E. MCCULLOUGH.

Dr. Wendell C. Phillips, New York, moved that the report be received as a whole and adopted. Seconded.

Dr. Alexander Lambert, New York, moved as an amendment that that section of the report relating to Procedure in Preferring Charges be referred to the Reference Committee on Amendments to the Constitution and By-Laws, instead of to the Reference Committee on Rules and Order of Business.

The amendment was seconded, accepted, and the original motion as amended was put and carried.

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. Floyd M. Crandall, New York, Chairman, read the report of the Reference Committee on Amendments to the Constitution and By-Laws, and moved that the report be considered seriatim.

Seconded and carried.

The report is as follows:

Your committee respectfully recommends that the following changes be made in the Constitution and By-Laws of this Association:

That there be added to Chapter VII, Section 3:

(*f*) Council on Sections and Section Work.

Sec. 9. COUNCIL ON SECTIONS AND SECTION WORK. The Council on Sections and Section Work shall consist of four Fellows representing the four main divisions of the Scientific Assembly: Medical Sciences, Medicine, Surgery, the Specialties and the Secretary of the A. M. A. ex officio. One member of the Council shall be elected to serve one year, one to serve two years, one three years, and one four years. Thereafter, one shall be elected each year to serve four years. The Council shall organize and elect its own officers.

The function of the Council on Sections and Section Work shall be:

1. To secure cooperation between the sections.
2. To pass upon questions of policy in relation to section work.
3. To stimulate the development of the sections.
4. To consider at first hand applications for new sections, or for changes in existing sections, and to report to the House of Delegates.

That the sections of the By-Laws which follow be renumbered.

That paragraph (1), Sec. 11, Chapter VII be repealed.

(The said Section reads: "A Committee on Sections and Section Work, to which shall be referred all business relating to the sections.")

Your committee also recommends that the portions of the report of the Committee on Sections and Section Work dealing with the rearrangement of the sections be referred to the Council on Sections and Section Work when appointed.

A communication directed to the Secretary of the American Medical Association by the Medical Society of the District of Columbia was referred to this committee for consideration. This communication asked the following change in the By-Laws: To substitute the following for Sec. 3, Chapter VIII:

REMOVAL OF MEMBERS.—A member of a constituent association removing from the jurisdiction thereof, may remain eligible for membership in the American Medical Association for a period of eighteen months following such removal, after which such eligibility shall cease, unless or until it is reestablished by his becoming a member of the constituent association of the jurisdiction in which he is located.

Your committee recommends that the proposition by the District of Columbia be not concurred in.

In view of the fact that certain sections of the By-Laws are contradictory, the Judicial Council recommends: "That from Section 8, Chapter X, the words 'at the time of the election of its officers' be deleted from the first section of the sentence, and that there be added immediately after the first section of the sentence a new section as follows: 'Provided, however, that nominations for honorary fellowship in the American Medical Association shall be acted on by the sections on or before the second day of each assembly,' so that the entire section shall read:

'Each section at each Scientific Assembly may nominate for Honorary Fellowship in the American Medical Association a physician of a foreign country who has risen to preeminence in the profession of medicine, provided, however, that nominations for Honorary Fellowship in the American Medical Association shall be acted on by the sections on or before the second day of each Scientific Assembly. The secretary of the section shall immediately notify the Secretary of the Association of such nomination.' "

Your committee recommends the adoption of this amendment.

Upon the subject of membership in an adjoining state, the Judicial Council further recommends to the House of Delegates:

"That the following sentence be inserted immediately before the final sentence in Section 3, Chapter VIII, of the By-Laws:

'and provided further, that members of a constituent state association who are located for the purpose of practicing medicine in a state adjacent to that through the association of which they hold membership in the American Medical Association, may be continued as members of the American Medical Association, provided the Council of the medical association of the state in which they are practicing medicine waives jurisdiction over the membership of the individual member who holds his connection with the organization through a neighboring consituent state medical association.'

In compliance with the recommendations of the Judicial Council your committee recommends that the words "(b) organization" be stricken from Section 5, Chapter VII of the By-Laws.

This action is taken in order that the By-Laws shall agree with the existing organization of the American Medical Association.

Standing Rule.—In compliance with the recommendations of the Judicial Council, your committee recommends the enactment of the following standing rule:

PROCEDURE IN PREFERRING CHARGES

The Secretary of the American Medical Association shall file charges with the Judicial Council against Fellows of the Association when overt acts on the part of such Fellows, supported by reasonable evidence, are brought to the attention of the Secretary of the American Medical Association.

FLOYD M. CRANDALL,
C. E. CANTRELL,
DEAN LEWIS,
SOL G. KAHN.

(1) That part of the report relating to a Council on Sections and Section Work was read.

Dr. Wendell C. Phillips, New York, moved that it be adopted.

Seconded and carried.

(2) That section of the report pertaining to the communication from the Medical Society of the District of Columbia was read. It was moved that the recommendation of the committee be concurred in. Seconded.

After discussion by Dr. G. Wyeth Cook, District of Columbia, the chairman of the Reference Committee, and Dr. Alexander Lambert, New York, the motion was put and carried.

(3) That section of the report relative to an amendment to Section 8, Chapter X, was read.

Dr. William L. Noble, Illinois, moved that the recommendation be adopted.

Seconded and carried.

(4) The section relating to Membership in an Adjoining State was read.

Dr. C. E. Cantrell, Texas, moved its adoption.

Seconded and carried.

(5) The section relating to the enactment of a Standing Rule for Preferring Charges was read.

Dr. Wendell C. Phillips, New York, moved its adoption.

Seconded and carried.

On motion, which was duly seconded, the report was then adopted as a whole.

Dr. Dwight H. Murray, New York, offered the following resolution, which was referred to the Reference Committee on Rules and Order of Business:

Resolved, That the order of business for the Thursday afternoon meeting of the House of Delegates be changed by inserting as No. 4 "Report of Committee on Transportation and Place of Session" and No. 5 "Selection of the Place and Fixing the Time for the 1916 Annual Session" and numbering the present No. 4 No. 6 and the present No. 5 No. 7.

Dr. Wendell C. Phillips, New York, moved it is the sense of the House of Delegates that only condensed reports of standing committees be presented at the Monday morning meeting of the House of Delegates (the first meeting), and that there be no afternoon meeting, in order that the Reference Committees be permitted this time for their work.

On motion, which was duly seconded, this matter was referred to the Reference Committee on Rules and Order of Business.

Dr. T. C. McCleave, California, delegate from the Section on Diseases of Children, presented the following:

The Committee on "Betterment of the Section," Section on Diseases of Children, begs to submit the following for the consideration of the House of Delegates:

WHEREAS, The activity of the American Association of Medical Milk Commissions has resulted in the establishment of some seventy-five commissions in the United States and Canada, largely under the auspices of county medical societies, and there has thus been made available in many communities a certified milk designed for clinical purposes, which, at the same time, has greatly stimulated improvement in the general milk supply, to the consequent reduction of infant morbidity and mortality, be it

Resolved, That the House of Delegates commends the purpose of the American Association of Milk Commissions, and recommends to component societies the organization of medical milk commissions wherever warranted by local conditions.

Committee,

J. P. SEDGWICK,
F. S. CHURCHILL,
T. C. MCCLEAVE,
T. C. MCCLEAVE,
Delegate.

The above resolution was referred to the Reference Committee on Sections and Section Work.

Dr. T. C. McCleave, California, then presented the following preambles and resolutions, which were referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, The American Association of Medical Milk Commissions, through its nine (9) years of existence, has fostered the establishment by county medical societies of some eighty (80) medical milk commissions; and

WHEREAS, These commissions now an activity of our unit organizations, the county medical societies, have uniformly crystallized public sentiment in favor of a pure milk supply and indirectly, through public interest thereby developed, have been able to bring about better health administration; therefore, be it

Resolved, That the House of Delegates commend this activity to county societies and to this end instruct the Council on Health and Public Instruction to issue a bulletin on organization and purpose of medical milk commissions.

Dr. A. W. McAlester, Jr., Missouri, offered the following preambles and resolutions, which were referred to the Reference Committee on Legislation and Political Action:

WHEREAS, It is becoming increasingly evident that the people, and especially the wage-earning classes, are being deceived and defrauded and not infrequently their health being seriously impaired through the use of remedies of unknown composition, and

WHEREAS, The Council on Pharmacy and Chemistry of the American Medical Association has repeatedly proven the worthlessness and fraudulency of many of these so-called remedies, and

WHEREAS, The health of the people is the basis of all national progress and prosperity and should be conserved and safeguarded as a national asset by the national government, and,

WHEREAS, The medical profession through its organization, the American Medical Association, has faithfully endeavored to fulfil its obligation by rendering to humanity its best service in promoting the health of the nations, freely and unselfishly, and has through its Council on Pharmacy and Chemistry exposed the cupidity of persons who exploit the sick and afflicted for financial gain, and has proven the fraudulency and worthlessness as well as the dangers of many of the so-called remedies sold to the people; and through its Council on Health and Public Instruction has endeavored to instruct the people in the laws of hygiene and sanitation and the fundamental principles of preventive medicine, and

WHEREAS, The evil influence of fraudulent and worthless remedies upon the health of the people is nation wide and cannot be adequately counteracted by the limited facilities of any private body of citizens, therefore be it

Resolved, That the House of Delegates of the American Medical Association in general session assembled should petition, and it does hereby petition, the President of the United States and Congress to create a commission either through a department or bureau already established, or by special appointment, to investigate patent and proprietary remedies sold in interstate traffic and offered to the people for the relief and cure of bodily and mental infirmities, to the end that the people shall have a plain, truthful and unprejudiced report of the actual value of such articles, and to expose the fraudulent and deceitful practices that such investigation might disclose; so that the people may no longer be made the innocent victims of avarice and fraud when seeking the means to regain their health, and be it further

Resolved, That the House of Delegates pledge the earnest support and cooperation of the American Medical Association to the President of the United States and to Congress in the prosecution of this all important duty to the people.

Dr. E. J. Goodwin, Missouri, nominated Dr. William Porter, St. Louis, for affiliate fellowship.

At this juncture, the first vice-president, Dr. D. S. Fairchild, Clinton, Iowa, took the chair.

Report of Reference Committee on Legislation and Political Action

Dr. E. J. Goodwin, chairman, Missouri, presented the report of the Reference Committee on Legislation and Political Action as follows:

Your Reference Committee on Legislation and Political Action has before it the report of the Council on Health and Public Instruction with the several subcommittees of that Council.

Your Reference Committee endorses the suggestion of the Council that the Board of Trustees be requested to consider an appropriation to the Council for the purpose of placing the Medicolegal Bureau on a sufficiently firm financial basis to enable that bureau to compile and digest all Supreme Court decisions on professional malpractice suits for the benefit of the state societies.

The work of the Council in coordinating the activities of the numerous voluntary health organizations is particularly commended, and your Reference Committee recommends that the Council be encouraged to pursue this endeavor with special efforts.

Your Reference Committee desires also to lay special emphasis on the successful endeavor of the Council to interest the cooperation of the National Educational Association, and urge the Council to use every proper means for the continued harmonious cooperation of these two bodies.

We especially commend the work of the subcommittees of the Council, and find only words of commendation and encouragement for these bodies to continue their functions in the splendid spirit of cooperation so manifest throughout the report.

Your Reference Committee believes it is needless to instance any further the numerous activities of the Council, and concludes its report with a very emphatic endorsement of the manner in which the Council has fulfilled its duties.

Dr. A. W. McAlester, Jr., Missouri, moved the adoption of the report. Seconded.

Dr. C. E. Cantrell, Texas, moved as an amendment that inasmuch as the appropriation of money was involved, the report be referred to the Board of Trustees.

The amendment was seconded, accepted, and the original motion as amended was carried.

On motion, which was duly seconded, the House of Delegates adjourned until 2 p. m., Thursday.

Fourth Meeting—Thursday Afternoon, June 24

The House of Delegates met and was called to order at 2:15 p. m., by the President.

Dr. E. J. McKnight, Connecticut, Chairman, made a supplementary report from the Committee on Credentials, stating that eleven additional delegates had qualified, making a total registration of 108 delegates.

The Secretary called the roll, and 101 delegates responded.

The minutes of the previous meeting were read and approved.

Election of Officers

The first order of business was the election of officers. The House proceeded with an election, which resulted in the choice of the following:

President—RUPERT E. BLUE, Washington, D. C.

First Vice-President—ALBERT VANDER VEER, Albany, N. Y.

Second Vice-President—GEORGE B. EVANS, Dayton, Ohio.

Third Vice-President—DONALD CAMPBELL, Butte, Mont.

Fourth Vice-President—HERBERT C. MOFFITT, San Francisco.

Secretary—ALEXANDER R. CRAIG, Chicago.

Treasurer—WILLIAM ALLEN PUSEY, Chicago.

Trustees—M. L. HARRIS, Chicago; WILLIAM T. COUNCILMAN, Boston and THOMAS MCDAVITT, St. Paul.

Judicial Council—JAMES E. MOORE, Minneapolis, and RANDOLPH WINSLOW, Baltimore (to fill unexpired term of GEORGE W. GUTHRIE, deceased).

Council on Health and Public Instruction—MILTON BOARD, Louisville, Ky.

Member of Council on Medical Education—ROBERT C. COFFEY, Portland, Ore.

Council on Scientific Assembly—GEORGE H. SIMMONS, Chicago; RICHARD S. MORRIS, Clifton Springs, N. Y.; E. S. JUDD, Rochester, Minn.; J. SHELTON HORSLEY, Richmond, Va., and the Secretary of the Association, ex officio; DR. SIMMONS to serve for four years; DR. MORRIS for three years; DR. JUDD for two years and DR. HORSLEY for one year.

The Secretary presented a list of applicants for associate fellowship endorsed by the officers of the Section on Pathology and Physiology, and also a similar list endorsed by the officers of the Section on Preventive Medicine and Public Health.

It was moved that the Secretary be authorized to cast the ballot of the House in each instance in which the applicant is not eligible for membership in the state association of the state in which he resides, and provided that no objection to the applicant is filed by the officers of the said state association.

Seconded and carried.

Dr. E. E. Montgomery, Pennsylvania, Chairman, reported that the Reference Committee on Sections and Section Work unanimously recommended the names of the following nominees for Honorary Fellowship: Prof. G. Arndt of Berlin, Germany; Prof. Otfrid Foerster, Breslau, Germany, and Dr. Wilfrid Harris, London, England.

In addition, the Reference Committee recommends that Dr. William Porter, nominated and endorsed by the Council of the Missouri State Medical Society for Affiliate Fellowship, be elected an Affiliate Fellow.

Dr. C. E. Cantrell, Texas, moved the adoption of the report, together with the recommendations contained therein.

Seconded and carried.

Report of Committee on Transportation and Place of Session

Dr. J. R. Pennington, Illinois, Chairman, presented the report of the Committee on Transportation and Place of Session as follows:

Your Committee on Transportation and Place of Session met and considered carefully the hotel advantages and railroad facilities of the various cities that have extended invitations to the Association in which to hold its 1916 meeting.

Invitations have been received from the following cities: Chicago, Cincinnati, Detroit and New York.

Your committee recommends that the 1916 session be held in the city of Detroit.

Respectfully submitted,

J. RAWSON PENNINGTON, Chairman,
W. T. SARLES,
G. A. HARE,
DONALD CAMPBELL,
R. W. CORWIN.

Detroit, Cincinnati and New York were placed in nomination, and a ballot taken with the result that Detroit was selected as the place for the next meeting.

It was then moved and seconded that Detroit be made the unanimous choice as the place for the annual session of 1916. Carried.

Dr. E. J. McKnight, Connecticut, moved that the Board of Trustees be empowered to determine the time of meeting.

Seconded and carried.

Dr. Alexander Lambert, New York, asked unanimous consent to present an amendment to Article IX, Section 1, of the Constitution, which was granted, when he offered the following: After the word "Vice-Presidents," insert the words "a Chairman of the House of Delegates." (To lie over until next year.)

Dr. Dean Lewis, Delegate from the Section on Surgery, asked unanimous consent, which was granted, to introduce the following, which was referred to the Board of Trustees:

At the meeting of the American Surgical Association the Committee on Fractures made the following explanations and recommendations:

The work of this committee has been greatly hampered by the inadequacy of the records submitted for its consideration. A large proportion of the cases had to be rejected entirely, and most of them were so incomplete as to make deductions based upon them possibly misleading.

The first step in the betterment of practice is the study of results achieved by present day methods. An adequate study is impossible without adequate records.

The committee strongly urges the American Surgical Association to set its seal of approval upon the standard form of record submitted by the committee, and to further petition the American Medical Association to do the same. The committee also urges each member of this Association faithfully to keep these records in his practice and to see that they are kept in the hospitals to which he is attached.

The committee further recommends that a copy of the approved form be sent to all corporations within the United States of sufficient importance to have their own relief organizations or medical service or both, to all accident insurance companies to be embodied and incorporated in the papers given to the insured, with the requirement that they be filled at the time of an accident involving fracture; to all hospital boards with the request that these records be made a part of the routine records of fracture patients, pointing out that thus not only are the hospital and its surgeons protected in case of litigation, but that most valuable material is being collected to serve for attaining better results in the treatment of fractures.

The American Surgical Association adopted the report and recommendations and now especially petitions the American Medical Association to do the same.

The following resolution is, therefore, submitted to the Surgical Section:

Resolved, That the Surgical Section heartily recommend the standard form of fracture report submitted by the American Surgical Association; and be it further

Resolved, That the Section present this standard form of fracture report to the House of Delegates with the request that it be adopted as the standard form of fracture report by the American Medical Association.

Dr. G. Wyeth Cook, District of Columbia, Chairman, reported that the Reference Committee on Rules and Order of Business had considered the resolution offered by Dr. Dwight H. Murray in regard to transposing the order of business, and recommended that it be not done.

Dr. Wendell C. Phillips, New York, moved that the report be received and adopted.

Seconded and carried.

Dr. G. Wyeth Cook, District of Columbia, also reported that the Reference Committee on Rules and Order of Business had considered the motion of Dr. Phillips relative to condensed reports of standing committees, and recommended that it be adopted.

Dr. William L. Noble, Illinois, moved that the recommendation be concurred in.

Seconded and carried.

Report of Reference Committee on Legislation and Political Action

Dr. E. J. Goodwin, Missouri, Chairman, presented the report of the Reference Committee on Legislation and Political Action as follows:

Your Reference Committee on Legislation and Political Action had referred to it the preamble and resolutions requesting the president of the United States and Congress to create a commission to investigate patent and proprietary remedies sold in interstate traffic, and offered to the people for the relief and cure of bodily and mental infirmities, to the end that the people shall have a plain, truthful and unprejudiced report of the actual value of such articles, to expose the fraudulent and deceitful practices that such investigation might disclose, so that people may no longer be made the innocent victims of avarice and fraud when seeking means to regain their health.

Your Reference Committee heartily endorses the preamble and resolutions and recommends that the Secretary of the Association be instructed to send official communication to the president and to the members of both branches of Congress, and convey to them the facts in connection with the manufacture and sale of these so-called remedies as disclosed through the various activities of the American Medical Association.

E. J. GOODWIN, Chairman,
L. H. MCKINNIE,
M. R. WALKER,
W. H. SEEMAN.

It was moved that the report be adopted.

Seconded and carried.

Dr. J. W. Kerr, Washington, D. C., Chairman, reported for the Reference Committee on Hygiene and Public Health that two resolutions had been referred to the committee relating to the same subject, and were of like purport, encouraging the adoption by medical societies of a plan for the production of pure milk for clinical purposes. In view of the fact that the plan has been utilized by many societies, the committee respectfully recommends the adoption of the resolutions passed by the Section on Preventive Medicine and Public Health.

It was moved that the report be adopted.

Seconded and carried.

Dr. William H. Arthur, U. S. Army, Chairman, reported for the Reference Committee on Reports of Officers that the proposal contained in the address of President Rodman concerning a national board of examiners was approved by all members of the committee except one, who desired to submit a minority report. The other members of the committee respectfully recommended that the matter be submitted to the House of Delegates for approval.

Dr. A. R. Mitchell, Nebraska, presented the following minority report:

Not being in accord with the majority of your Reference Committee on Reports of Officers to which the President's address was automatically referred, I beg leave to submit the following minority report:

The scope of the address was very comprehensive and instructive. That portion which calls for the action of your committee, namely, the advisability of establishing a board of national examiners, contains material worthy of further consideration of the House of Delegates, and it is recommended that it be referred to the Council on Medical Education.

Respectfully submitted. A. R. MITCHELL.

Dr. William L. Noble, Illinois, moved the adoption of the minority report. Seconded.

Dr. G. V. I Brown, Wisconsin, moved as a substitute that the majority report be adopted. Seconded.

After considerable discussion, which was participated in by Drs. McCullough, Kerr, Brown, Hare, Carroll, Goodwin, Mitchell, Board, McKnight and President Rodman, who called Vice President Dr. Wisner R. Townsend to the chair, the substitute motion was put and declared lost. A division was called, and a rising vote taken, with the result that eighteen favored the majority report, and thirty-eight opposed. The motion was lost.

Dr. E. J. Goodwin, Missouri, moved that the minority report be adopted.

Seconded and carried.

Report of Committee on Awards for Scientific Exhibit

Dr. Hugh Cabot, Massachusetts, Chairman, presented the report of the Committee on Awards for Scientific Exhibit, as follows:

The Committee on Awards for the Scientific Exhibit begs leave to report as follows:

After much careful consideration, we have been unable to decide between two exhibits of unusual excellence, and are of the opinion that their value must be regarded as equal. We therefore advise that two gold medals be awarded, one to the Pathological Department of Stanford University and the other to the Pathological Department of the University of Michigan. The committee awards the following certificates of merit for the following exhibits:

1. The Indiana State Board of Health, for its exhibit of a public health campaign.

2. Drs. C. C. Bass and F. M. Johns, Tulane University, on pyorrhea alveolaris and malaria.

3. Drs. Claude A. Smith and Jack Witherspoon on hookworm.

4. The Pathological Laboratory of the New York Lying-in Hospital on demonstration of the cultivation of human tissue in vitro.

5. Dr. Martin H. Fischer on newer experiments on physiology and pathology of kidney functions.

6. Dr. J. T. Case on lantern slides illustrating Roentgen ray studies.

Your committee has been deeply impressed with the very high grade of excellence of the exhibits, and believes that everything should be done to encourage the development of this part of the Association's activity. Too much praise cannot be given to the untiring energy and efficiency of Dr. Frank B. Wynn, Chairman of the Committee on Scientific Exhibit, and we desire to record our opinion that the Association owes him a debt of gratitude.

HUGH CABOT,
V. G. VECKI,
E. W. HAASS.

It was moved that the report be adopted.

Seconded and carried.

Report of Committee on Scientific Exhibit

Dr. Frank B. Wynn, Indiana, Chairman, presented the report of the Committee on Scientific Exhibit as follows:

Both in quality and number, the scientific exhibits presented at this session have exceeded the most sanguine expectations of the committee. The counter attraction of the Panama-Pacific Exposition, with its artistic and elaborate exhibits dealing with all phases of science, was no small obstacle in the way of securing participation in a transient exhibition. In spite of the fear of contrast, thirty-two have shown their loyalty to and deep interest in this important feature of the Association work.

The geographic distribution of those participating is of interest. Of the thirty-two exhibitors, twelve are from the Far West, ten from the Mississippi Valley, six from the Eastern Coast, and four from the South. The wide distribution of participants throughout the country teaches the lesson of how deep the hold of this phase of the Association work is upon the scientific investigators everywhere. It emphasizes, too, the growing conviction that the Scientific Exhibit offers the best possible arena in which to present the fruits of research investigations.

The exhibits presented cover a wide range of subjects. The one feature emphasized at the session is the scientific foundation of preventive medicine, shown in exhibits especially on malaria, hookworm, syphilis, gonorrhea, tuberculosis and pyorrhea alveolaris. They are not the conventional public health exhibits, which all too often indulge in the sensational and extreme — necessary perhaps in appealing to the ignorant. On the contrary, they seek to show the scientific basis upon which substantial progress in disease prevention must rest. These, after all, constitute the most valuable public health propaganda, for they appeal to the reason and well-poised judgment of the intelligent and ruling minority.

These exhibits have been prepared with great pains and at considerable expense. Their presentation will interest and instruct the practitioner, permitting him to look in upon the very latest facts regarding these preventable diseases. Intelligent laymen cannot fail to be impressed by the truths made plain.

Besides these exhibits, the Board of Trustees put upon your committee the responsibility of preparing a program of lantern lectures dealing with the same topics. As has been stated regarding the exhibits, let it also be said of the addresses. They are not merely popular presentations. Given by experts, they will show the historical and scientific evolution of our knowledge concerning these diseases, setting forth triumphantly both to physicians and to laymen the debt of the world to scientific medicine in the promotion of social, economic and humanitarian progress.

Sixteen years as chairman of this committee warrants the statement that the metes and bounds of scientific truth are not alone within the walls of great universities. From these sources naturally we must continue to receive the chief light to illumine our way. But this does not excuse even the humblest practitioner from obligation to ideals in the use of the talents given him. Immemorial is the tenet of our profession to search for the truth and make it known to our fellows, without money and without price. The country practitioner constitutes an important factor in the membership of this great democratic organization. How may he be served more fully; and in what manner may he be made to contribute his part toward medical progress? The awesomeness of laboratories and specialism should not drive him into inactive scientific stagnation. This is a serious problem for Association consideration. In its solution your committee feels that the Scientific Exhibit presents an avenue through which great encouragement and aid may be rendered toward a neglected class of our fellows. Why not exhibits limited to country practitioners as ordinarily construed? Let these set forth his problems and difficulties, which ofttimes bring the gravest responsibilities and in emergencies call into action the finest kind of originality. In this way there should come to this large class of our professional brethren great benefits to themselves and mutual enlightenment to us all. The country doctor is even more beloved by the laity than the city practitioner. The Committee on Scientific Exhibit stands committed to a policy which will aid him in solution of his problems, and stimulate him to research, clinical and scientific, in a field which is peculiarly his own.

FRANK B. WYNN, *Chairman*,
WILLIAM OPHULS,
LOUIS B. WILSON,
STANLEY P. BLACK,
P. M. HICKEY.

It was moved that the report be adopted.
Seconded and carried.

Report of Committee on Reapportionment

Dr. R. M. Funkhouser, Missouri, reported for the Committee on Reapportionment as follows:

Your Committee on Reapportionment recommends to the House that the apportionment of the next three years shall be on the basis of one delegate for every 765 and fraction thereof of membership of the constituent state association reported as of April 1, 1915.

The committee appends a table recording the present apportionment, the number of members of the different state associations reported by the secretaries of these state associations as of April 1, 1915, and an apportionment made on the basis of 765 and fraction thereof.

The apportionment based on a representation of one delegate for every 765 and fraction thereof members distributes 140 voting delegates of the House of Delegates.

ROBERT M. FUNKHOUSER, *Chairman*,
LYMAN ASA JONES,
ALONZO B. WALKER,
VICTOR C. VAUGHAN,
ALEXANDER R. CRAIG.

(The appended table shows changes in the delegations from but two of the states—California is accorded four delegates, while Ohio receives but five.)

It was moved that the report be adopted.
Seconded and carried.

The following expression of appreciation for courtesies received by the Association and the Fellows in attendance on the annual session just closing was moved, seconded, and unanimously carried:

Resolved, That the House of Delegates hereby express the thanks of the Association to the Local Committee on Arrangements and to the members of the San Francisco County Medical Society and to the other members of the Medical Society of the State of California for the welcome which has been accorded the Fellows of the Association during their visit to San Francisco.

Also, to the Board of Directors of the Panama-Pacific International Exposition for placing at the disposal of the Association the Exposition Memorial Auditorium and for other courtesies extended to the Association, and to the press of San Francisco and to all who have contributed to the comfort and convenience of the Fellows during their stay in San Francisco.

As there was no further business, on motion, which was duly seconded and carried, the House of Delegates adjourned *sine die*.

THE SCIENTIFIC ASSEMBLY

THE OPENING GENERAL MEETING

Tuesday Morning, June 22

The opening meeting of the American Medical Association was held at the Columbia Theater, Tuesday, June 22, 1915.

On the stage were Ex-Presidents, members of the Board of Trustees, members of Standing Committees, members of the House of Delegates, and Delegates from the Pan-American Medical Congress.

The meeting was called to order at 10:30 a. m. by the President, Dr. Victor C. Vaughan, Ann Arbor, Mich.

Prayer was offered by Bishop William Ford Nichols, San Francisco.

In the absence of the Hon. James Rolph, Jr., Mayor of San Francisco, Mr. Edward J. Rain was introduced as the representative of the Mayor, who delivered the following address:

ADDRESS OF WELCOME

Mr. President, Members of the American Medical Association, Ladies and Gentlemen: I understand that the delegates here present come from all over the state and from all over our country, and that you as an association are devoting yourselves to the task of putting yourselves out of business. The great object of your organization lies along the lines of preventive medicine. San Francisco has more opportunities to test the theory of preventive medicine than any other city in the world, because we have been through so many things. You all know what Dr. Blue has done in the way of preventive measures along the lines of health protection for San Francisco immediately after the fire, and I feel it is an especial honor that the people of San Francisco should have you hold your convention in this city. I feel that I am talking to the greatest body of men and women I have ever had the pleasure of addressing in behalf of the people of San Francisco. I may say, you are the most expensive men and women that there are in the country. (Laughter.) In saying that, I am not trying to joke about doctors' bills, but I

mean it because it is a great privilege for me personally to have a few minutes' conversation with so many doctors without charge. (Laughter.) I am thinking of the fact that in the education of medical men of this country more money has been spent both by the public and by private individuals to make you what you are than upon any other class of men and women; and I do not exclude lawyers who are to come here some time next month. Some wonderful things have been accomplished by you, and through your individual efforts and the organization which you represent for the public. The public ought to think mighty well of such an association as this, and I am sure they do. As a profession, you are striving to prevent disease and to keep us on earth as long as possible. You first bring us into the world, and then you strive to have us remain here as long as you can, and then finally you help us out of it. We owe you a great debt of gratitude. The people of San Francisco greatly honor and respect the medical profession. They value highly what you are doing. You are welcome to our city. We wish you good luck in your deliberations, success through all the days of your lives, and we hope that you will visit this city again and give us this honor which we so highly appreciate. (Applause.)

Dr. Harry M. Sherman, San Francisco, President of the Medical Society of the State of California, was next introduced and delivered an address of welcome on the part of the medical profession.

ADDRESS OF WELCOME BY DR. SHERMAN

Mr. President, and Fellows of the American Medical Association, Ladies and Gentlemen: I am here this morning to extend to you a welcome from the medical profession of California, and I do so with open arms and open heart. We welcome you here to this meeting as brothers coming from all over the country. From the northernmost coast of Maine to the southernmost coast of our state, and from Florida to Oregon and Washington, we are all brothers, following one calling and doing one thing. As the animals in the jungle in Kipling's wonderful story, we are all brothers, you and I, although we are not as predatory as the animals.

We have here the same problems to deal with that you have at home, and while we may not be solving them exactly as you do, we are doing our best, and we wish you to watch us, see what we are doing, and compare our ways and methods with your ways and find out or help us to find out which may be the better. Our school problems, our hospital problems, our clinical problems, our social service problems, press closely upon the medical profession, and we wish you to see what we are doing, and if we are doing things as we should, and if not, teach us to do better.

It is almost impossible to get away from the climate of California. I had not intended to mention this threadbare subject to you, but as so many complaints have been dinned into my ears from those who came from the East, I cannot refrain from doing so. The people are searching for warmer clothing, more blankets, and claim they are colder here than they are at home in winter. There is a bit about the geography of this state which can be told. North of us is the interior of the Sacramento Valley, and south of us is the San Joaquin Valley, where we have the heated air and breezes from the ocean which come in through the Golden Gate. The climate of California has been arranged for us by Nature. People find it a welcome climate to stay in, to live in, to play in and to work in.

It is now twenty-one years since the American Medical Association came to San Francisco, and that is about the right time that should elapse before the next visit. (Laughter.) In that time you have been to Los Angeles on the south and Portland on the north, but you must remember the distance from San Francisco to Los Angeles is not that between Philadelphia and New York, and that it takes nearly three-quarters of a day to go to Los Angeles, and more than a day to get to Portland. We think your coming here once in about twenty years is about the right proportion, because this Association brings tremendous things with it. It brings them to us, and to many who cannot go to it. Then it gives us here the inalienable right to return the same hospitality and goodfellowship and courtesies which we have received when we have gone to the East. I think each one of you will agree with me, whether born in California, or a California resident, that to come to California five times in a century is something no man should object to. I thank you. (Applause.)

ADDRESS OF WELCOME BY MR. ROWELL

The President, Dr. Vaughan, said:

There has been some discussion as to whether the Progressive Party is alive, or whether it should be addressed as the late party. The belated representative of the Progressive Governor of California, Mr. Chester Rowell, will now address us. (Laughter.)

Mr. President and Members of the American Medical Association: Since Dr. Vaughan has mentioned politics, I may say that whatever question there may be about the Progressive Party in Michigan, there is no question that in California it is very much alive. (Laughter.)

I have come as the belated representative of the Governor of California to extend to you a welcome on behalf of the state. Unfortunately, the governor is unable to be present, partly by reason of business, and partly owing to the strenuous labors of vetoing a considerable number of progressive bills which the progressive legislature has just passed, and his physicians have ordered rest and retirement. (Laughter.) As his poor representative, I have the proud privilege of addressing you, the proudest body in America, because you represent that profession which most proudly, most worthily carries forward the chief task of the twentieth century—the task of making this world better fit to live in. You, too, represent in a high degree the medical profession as a profession, as a science and as an art. You stand committed to the truth that there are no sects in the Temple of Truth, and that there are no frontiers in the Republic of Science. There may be many sorts of ignorance, and of error, but there is only one sort of truth, and inasmuch as all of us are to a very considerable extent ignorant, and are subject to many errors, we shall continue to make them so long as we retain our human imperfections. We all recognize the Republic of Science, which includes all known truths and all genuine search after truth, and to that unity of medical science and medical art you stand as a profession committed. To the elevation of the standards of the profession, to the protection of its ethics, to the protection of its relations to the public, and to the protection of the public itself, you stand also committed, and as a member of that unenlightened public, may I express to you our obligations and our debt of gratitude to you for what you have done, and our hope for that which you shall do. Among other things, may I express the hope that you will devote yourselves, not merely to the alleviation of our physical ills, but to some extent to the enlightenment of our mental darkness, because no one can be more painfully conscious than you of the depths of that darkness and of the needs of being alive in it. Through the profession in which I am engaged there has been promulgated for illgotten gain a lot of medical information to the people. The people have been informed that all their traditions and prejudices were correct in regard to the medical profession. They have been educated to believe that medicine is still an art of magic. They have been educated to know that any person is fully competent to diagnose his own case, and that the physician, by reason of his expert knowledge, specifies the remedy that will cure the particular disease, or that Nature has provided a remedy for every disease, and all physicians know the secrets of these remedies. But the particular physician who has received this particular bit of education has discovered a new remedy which will cure some of the diseases that nobody could cure before, and so he is regarded as a great and wonderful man. The people have been taught that they are right in believing that just as there is one creed for the Methodists, one for the Jew, one for the Catholic, so there are as many creeds of medicine, and that there is no difference between them, except that each one of them is regarded as the best, no matter to which he belongs.

I congratulate you that you have in some small way sent around some lecturers to educate a small number of people in the broader doctrine, and I have had the pleasure sometimes of presiding over meetings at which wonderfully brilliant lectures were delivered to audiences of from twenty-five to forty-two, and every one seemed fully enlightened. (Laughter.) I do not say this to disparage your efforts, for you are making a great and noble effort toward spreading the gospel of sanitation and good health among the people. But it is to be hoped that you will go deeper, that you will spread things farther apart until at last there shall be an aperture through the outer encasement of the mental darkness in which many of us dwell, through which the light may enter.

I remember very well that thirty years ago, when I was a student in the University of Michigan, sanitary science was taught one hour a week, and when the boys needed an extra rest they took that course for a snap. (Laughter.) Those were the times when the whole science of bacteriology was quite new to students, and very new to the people. Those were the times when Dr. Vaughan did his own epoch-making work on ptomaines, leukomaines, beginning to bridge the gap between bacteriology and chemistry. Those were the times when sanitary science was taught as a snap one hour a week, and now we have just established in the University of California a new degree, Doctor of Public Health, which is granted to trained persons, not necessarily physicians, to take care of the public health, and possibly it would be a good thing if the medical profession should so brilliantly succeed in monopolizing that function that there would be no room for our lay graduates in public health. (Applause.)

Again, the science of preventive medicine has gone on until it has built the Panama Canal, until it has established the Republic of Cuba, until it has protected this frontier on which you now stand, a frontier between the sanitation of the Occident and the plagues of the Orient. (Applause.) At this frontier a distinguished member of your profession has protected the city of San Francisco against the violent and narrowminded opposition of members of my profession, and has made it a city in which you can meet with pleasure and comfort. (Applause.) In this frontier your profession has taught us the relation between rats and the plague. At other frontiers it has taught us the relation between mosquitoes and malaria and yellow fever. You are teaching the whole world how to protect itself, and at last Cuba and Panama are examples of it, thus bridging the gap between the North and the South.

It is my pleasing function to greet you and to welcome you upon behalf of the governor of the state of California. We in California are very proud of this city and of our state. We are proud of the medical profession, and of the things that the medical profession stand for in this state. We are proudest of all of the things that Nature has done for California, making it the beauty spot of the world. We hope all of you will enjoy your stay in this city. We want you all to remain as long as you can. In short, you cannot stay too long in California. I have been here myself more than twenty years. I have traveled all over it and have just begun to see it. If some of you could extend your visit for twenty days, we will try to show you something worth while. In the meantime, you are a thousand times welcome to California. (Loud Applause.)

THE PRESIDENT: My friends and Fellow members of the Association: During the past year, as President of the American Medical Association, many honors and many privileges have come to me which I have greatly appreciated. None, however, do I appreciate more than that which now falls to my lot, and that is to introduce to you the distinguished surgeon who is to be your President for next year —Dr. William L. Rodman. (Applause.)

Dr. Rodman then delivered his address as President of the Association. He selected for his subject "Work of the American Medical Association."

Adjourned.

MINUTES OF THE SECTIONS

PRACTICE OF MEDICINE

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order at 2 p. m. by the Chairman, Dr. Thomas McCrae, Philadelphia.

Dr. McCrae then read the Chairman's Address, entitled "The Use of Words." No discussion.

Dr. James S. McLester, Birmingham, Ala., read a paper on "Phenoltetrachlorphthalein Test of Liver Function; a Series of Unselected Cases (Lantern Demonstration)." Discussed by Drs. George Whipple, San Francisco; Thomas Addis, San Francisco, and James S. McLester, Birmingham, Ala.

Dr. Ray Lyman Wilbur, San Francisco, read a paper on "Leukemia — an Infection?" with report of cases. Discussed by Drs. Carl R. Krone, Oakland, Calif.; Max Einhorn, New York; J. A. Lichty, Pittsburgh, and R. L. Wilbur, San Francisco.

Dr. W. W. Duke, Kansas City, read a paper on "Clinical Interpretation of the Platelet Count." Discussed by Drs. Gerald Webb, Colorado Springs; S. H. Hurwitz, San Francisco, and W. W. Duke, Kansas City.

The Chairman appointed the following Nominating Committee: Drs. W. Jarvis Barlow, Los Angeles; Alexander Lambert, New York, and William Fitch Cheney, San Francisco.

Dr. Max Einhorn, New York, read a paper on "A Clinical Contribution to Our Knowledge of Chronic Pancreatitis." No discussion.

THURSDAY, JUNE 24— MORNING

The report of the Nominating Committee was read by Dr. W. Jarvis Barlow, Los Angeles. On motion, duly seconded, the secretary cast the ballot for the unanimous election of the officers recommended by the Nominating Committee.

Dr. C. C. Bass, New Orleans, read a paper on "Specific Treatment of the Malignant Forms of Malaria." Discussed by Drs. Walter V. Brem, Los Angeles; C. S. Williamson, Chicago, and C. C. Bass, New Orleans.

Dr. Frank Smithies, Chicago, read a paper on "Syphilis of the Stomach (Lantern Demonstration)." Discussed by Drs. Dudley Fulton, Los Angeles; S. Max White, Minneapolis; Max Einhorn, New York; George Eusterman, Rochester, Minn.; Charles E. Sears, Portland, Ore.; Frank Smithies, Chicago; Joseph von Werthern, San Francisco, and Frank Smithies, Chicago.

Dr. William Fitch Cheney, San Francisco, read a paper on "Gastric Cancer as a Sequel to Gastric Ulcer." Discussed by Drs. Frank Smithies, Chicago; Max Einhorn, New York; F. A. Speik, Los Angeles; Thomas McCrae, Philadelphia, and W. F. Cheney, San Francisco.

Dr. George Eusterman, Rochester, Minn., read a paper by Dr. Christopher Graham and himself, Rochester, Minn., on "Essential Factors in the Diagnosis of Duodenal and Gastric Ulcers." Discussed by Drs. J. N. Hall, Denver; Max Einhorn, New York, and J. A. Lichty, Pittsburgh.

Dr. J. A. Lichty, Pittsburgh, read a paper "Concerning the End-Results of Gallbladder and Duct Diseases." Discussed by Drs. J. N. Hall, Denver; Max Einhorn, New York; J. A. McGarry, Los Angeles, and J. A. Lichty, Pittsburgh.

THURSDAY, JUNE 24— AFTERNOON

Drs. W. Jarvis Barlow and R. L. Cunningham, Los Angeles, presented a paper on "Chronic Nephritis, with Analysis of Two Hundred and Fifty Cases in Private Practice." Discussed by Drs. Alexander Lambert, New York; Philip King Brown, San Francisco; Joseph S. Cipes, Albuquerque, N. M., and W. Jarvis Barlow, Los Angeles.

Drs. Thomas Addis and Junsai Watanabe, Seattle, read a paper on "Standards of Urea Excretion (Lantern Demonstration)." Discussed by Drs. Lawrence Selling, Portland, Ore., and Thomas Addis, San Francisco.

Dr. Ernest C. Dickson, San Francisco, read a paper on "Botulism. An Experimental Study." Discussed by Dr. Thomas McCrae, Philadelphia.

Dr. Charles Spencer Williamson, Chicago, read a paper on "Influence of Age and Sex on Hemoglobin. A Spectrophotometric Analysis of Nine Hundred and Nineteen Cases." Discussed by Drs. Thomas Addis, San Francisco, and Charles Spencer Williamson, Chicago.

Dr. W. H. Witt, Nashville, Tenn., read a paper on "Prognosis in Heart Disease from the Point of View of Etiology." Discussed by Drs. C. S. Williamson, Chicago; James S. McLester, Birmingham, Ala.; John A. Witherspoon, Nashville, Tenn.; George E. Ebright, San Francisco, and W. H. Witt, Nashville.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order at 2:15 by the chairman, Dr. Charles H. Peck, New York.

Dr. M. Estes, chairman of the American Surgical Association, presented the following resolution;

Resolved, That the Surgical Section heartily recommend the standard form of fracture report submitted by the American Surgical Association, and be it further

Resolved, That the section present this standard form of fracture report to the House of Delegates with the request that it be adopted as the standard form of fracture report by the American Medical Association.

The resolution was duly seconded, and, without discussion, carried.

Dr. Peck then read the chairman's address, entitled "Benign Lesions of Stomach and Duodenum, with Special Reference to Late Operative Results." No discussion.

Dr. W. J. Mayo, Rochester, Minn., read a paper on "Chronic Gastric Ulcer." No immediate discussion.

Dr. A. J. Ochsner, Chicago, read a paper on "The Relation Between Chronic Ulcer and Cancer of the Stomach." Discussed by Drs. Emmet Rixford, San Francisco; William L. Rodman, Philadelphia; W. I. Terry, San Francisco; Miles F. Porter, Fort Wayne, Ind.; A. E. Rockey, Portland, Ore.; J. Chris O'Day, Portland, Ore., and C. G. Levison, San Francisco.

Dr. R. D. Carman, Rochester, Minn., read a paper by himself and Dr. D. C. Balfour, Rochester, Minn., on "Gastrojejunal Ulcers: Their Roentgenologic and Surgical Aspects." No discussion.

Dr. J. Rilus Eastman, Indianapolis, read a paper on "Surgical Anatomy of Cleft Palate." Discussed by Drs. Harry Sherman, San Francisco; Charles D. Lockwood, Pasadena, Calif.; Charles H. Peck, New York; George V. I. Brown, Milwaukee, Wis., and J. Rilus Eastman, Indianapolis.

The chairman announced that as Drs. Edward Martin, Philadelphia, and Arthur D. Bevan, Chicago, were absent, the section would have the papers of Drs. Rea Smith, Los Angeles, and O. M. Shere, Denver, read.

Dr. Rea Smith, Los Angeles, read a paper on "Ileocolostomy and Colectomy for Arthritis Deformans." Discussed by Drs. J. F. Percy, Galesburg, Ill., and M. Casper, Louisville, Ky.

Dr. O. M. Shere, Denver, read a paper on "Myositis Ossificans Traumatica." Discussed by Drs. Otis Lamson, Seattle; D. D. Lewis, Chicago; Alexius McGlannan, Baltimore, and O. M. Shere, Denver.

THURSDAY, JUNE 24—MORNING

Dr. Dean D. Lewis, Chicago, read a paper by himself and Dr. E. G. Kirk, Chicago, on "Fascial Tubulization in Repair of Nerve Defects—An Experimental Study." Discussed by Drs. A. A. Law, Minneapolis; John Golden, Chicago; Kenith MacKenzie, Portland, Ore.; F. W. Rinkenburger, Los Angeles, and Dean D. Lewis, Chicago.

The following officers were elected: Chairman, Dr. E. W. Andrews, Chicago; Vice Chairman, Dr. Fred. Murphy, St. Louis; Secretary, Dr. E. S. Judd, Rochester, Minn.; Orator, Dr. Emmett Rixford, San Francisco; Delegate, Dr. Dean D. Lewis, Chicago; Alternate, Dr. W. D. Haggard, Nashville, Tenn.

Dr. W. B. Russ, San Antonio, Tex., read a paper on "Selection of Operative Cases in Chronic Intestinal Stasis." Discussed by Drs. J. N. Jackson, Kansas City, Mo.; Robert Coffey, Portland, Ore.; Rea Smith, Los Angeles; F. W. Rinkenburger, Los Angeles; Robert Morris, New York; J. W. Draper, New York, and W. B. Russ, San Antonio, Tex.

Dr. W. B. Brinsmade, Brooklyn, read a paper on "Intestinal Adhesions." Discussed by Drs. A. S. Lobingier, Los Angeles; A. F. Jonas, Omaha; L. S. Pilcher, Brooklyn; W. I. Terry, San Francisco, and J. W. Draper, New York.

Dr. H. Beeckman Delatour, Brooklyn, read a paper on "Malignant Diseases of the Large Intestine."

Dr. D. F. Jones, Boston, read a paper on "Combined Abdominal and Sacral Operation for Carcinoma of the Rectum."

These two papers were discussed by Drs. Miles F. Porter, Fort Wayne, Ind.; C. B. Davis, Chicago; Alexius McGlannan, Baltimore; Louis J. Hirschmann, Detroit; Robert Coffey, Portland, Ore.; John Rawson Pennington, Chicago; H. Beeckman Delatour, Brooklyn, and D. F. Jones, Boston.

Dr. A. E. Rockey, Portland, Ore., read a paper on "The Transverse Incision in Operations for Appendicitis." Discussed by Drs. Robert Emmett Farr, Minneapolis; A. V. Moschcowitz, New York; J. Chris O'Day, Portland, Ore.; O. O. Witherbee, Los Angeles, and A. E. Rockey, Portland, Ore.

THURSDAY, JUNE 24—AFTERNOON

Dr. Samuel J. Mixter, Boston, read the Oration on Surgery, entitled "The Intestinal Tract.

Dr. J. T. Case, Battle Creek, Mich., read a paper on "Postoperative Roentgen Studies in Gastric and Intestinal Operations." No discussion.

Dr. F. H. Albee, New York, read a paper on "The Use of Inlay and Dowel Grafts in the Treatment of Fractures." Discussed by Drs. E. W. Ryerson, Chicago; John Golden, Chicago; Thomas W. Huntington, San Francisco, and F. H. Albee, New York.

Dr. J. F. Corbett, Minneapolis, read a paper on "The Suprarenal Gland in Shock." Discussed by Drs. J. E. Moore, Minneapolis, and J. F. Corbett, Minneapolis.

Dr. Bransford Lewis, St. Louis, read a paper on "Cystoscopic Methods in Ureteral Stricture and Calculus." Discussed by Drs. W. F. Braasch, Rochester, Minn.; L. W. Bremerman, Chicago, and Bransford Lewis, St. Louis.

Dr. Robert Abbe, New York, read a paper on "Roentgen-Ray Epitheliomas Curable by Radium—An Apparent Paradox." No discussion.

The following papers were read as a Symposium on War Surgery:

Dr. Wesley Earle Drennen, Birmingham, Ala.: "Experiences in Military Surgery."

Dr. F. E. McCullough, U. S. Navy, San Francisco: "Casualties of Modern Naval Warfare."

No discussion.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order by the Chairman, Dr. Norval H. Pierce, Chicago.

The Chairman appointed as substitutes on the Executive Committee Drs. H. W. Loeb, St. Louis; Henry Horn, San Francisco; Edward C. Sewall, San Francisco. Delegate, Dr. Hill Hastings, Los Angeles.

Dr. Pierce read the Chairman's Address, entitled "Transvaluations."

Dr. Henry Horn, San Francisco, read a paper on "The Etiology of Ozena." Discussed by Drs. W. T. Cummins, Southern Pacific Hospital; George H. Willcutt, San Francisco; William R. Murray, Minneapolis; Henry L. Wagner, San Francisco, and H. W. Loeb, St. Louis.

Dr. H. B. Graham, San Francisco, presented an exhibit showing by Roentgen-ray plate a tack in a man's lung.

Dr. Jerome B. Thomas, Palo Alto, Calif., read a paper on "Tuberculosis of the Frontal Sinus, with Report of Two Cases." Discussed by Dr. J. A. Pratt, Aurora, Ill.

Dr. Howard A. Lothrop, Boston, read a paper on "Frontal Sinus Suppuration with Results of Operative Procedure." No discussion.

Dr. Howard Young McNaught, San Francisco, read a paper on "Intranasal Antrum Operations with Report of Ninety Cases." Discussed by Drs. John J. Kyle, Los Angeles; Cullen F. Welty, San Francisco; William R. Murray, Minneapolis; Wendell C. Phillips, New York; H. B. Graham, San Francisco; Fred Stauffer, Salt Lake City; Justus A. Matthews, Rochester, Minn.; Norval H. Pierce, Chicago, and G. C. Kneedler, Pittsburgh.

THURSDAY, JUNE 24—MORNING

Instruments and appliances were presented as follows:

Dr. Frank C. Todd, Minneapolis, presented a device for packing the nose.

Dr. Harry L. Pollock, Chicago, presented a wash bottle for use in nasal operations; also knives for closing the eustachian tube after mastoid operation.

Dr. Edward C. Sewall, San Francisco, presented a light for giving binocular vision in tonsil work; also an instrument for opening the hypophysis.

Dr. George H. Willcutt, San Francisco, read a paper on "Acoustic Disturbances in the Early Stages of Lues."

Dr. Hill Hastings, Los Angeles, read a paper on "Syphilis of the Internal Ear. Report of Case."

These two papers were discussed by Drs. J. Holinger, Chicago, and George W. MacKenzie, Philadelphia.

Dr. G. P. Wintermute, San Francisco, read a paper on "Inflammation of the Auditory Nerve." Discussed by Drs. D. Harold Walker, Boston; H. B. Graham, San Francisco; Cullen Welty, San Francisco; H. W. Loeb, St. Louis; Harry L. Pollock, Chicago; William R. Murray, Minneapolis, and George W. MacKenzie, Philadelphia.

Dr. D. Harold Walker, Boston, read a paper on "Chronic Deafness: The Present Status of Its Treatment." Discussed by Drs. H. B. Graham, San Francisco; Harry L. Pollock, Chicago, and Henry Horn, San Francisco.

Dr. Edward C. Sewall, San Francisco, read a paper on "Operation on the Hypophysis After the Hersch Method." No discussion.

The report of the Nominating Committee, which was adopted, was as follows: Chairman, Dr. Hill Hastings, Los Angeles; Vice-Chairman, Dr. William R. Murray, Minneapolis; Secretary, Francis P. Emerson, Boston; Executive Committee, Drs. Robert Levy, Denver; Burt R. Shurly, Detroit; Norval H. Pierce, Chicago; Delegate, Dr. George E. Shambaugh, Chicago; Alternate, Dr. H. B. Graham, San Francisco.

THURSDAY, JUNE 24—AFTERNOON

Dr. H. B. Graham, San Francisco, read a paper on "Difficulties in the Diagnosis of Sinus Thrombosis." Discussed by Drs. Cullen F. Welty, San Francisco; George F. Cott, Buffalo; D. H. Trowbridge, Fresno, Calif.; Norval H. Pierce, Chicago, and Harry L. Pollock, Chicago.

Dr. John J. Kyle, Los Angeles, read a paper on "Early Diagnosis of Mastoiditis."

Dr. Virginius Dabney, Washington, D. C., read a paper on "Idiopathic Mastoid Abscess."

Dr. Cullen F. Welty, San Francisco, read a paper on "Mastoid Operations, with a Report of 150."

These three papers were discussed by Drs. J. Holinger, Chicago; Henry Horn, San Francisco; Frederick E. Franchere, Sioux City, Ia.; George F. Cott, Buffalo; Hill Hastings, Los Angeles; Edward C. Sewall, San Francisco; H. B. Graham, San Francisco; George W. MacKenzie, Philadelphia; James J. Pattee, Pueblo, Colo.; Norval H. Pierce, Chicago; Peter A. Jordan, San Jose, Calif., and W. C. Phillips, New York.

Dr. Wendell C. Phillips, New York, read a paper on "Chronic Purulent Otitis Media, with Reference to Tuberculosis." Discussed by Drs. John J. Kyle, Los Angeles; Cullen F. Welty, San Francisco, and Edgar F. Conant, Denver.

Dr. John J. McLoone, Phoenix, Ariz., read a paper on "Defects of the Singing Voice Due to Nasal and Accessory Sinus Disease." No discussion.

The new Chairman, Dr. Hill Hastings, Los Angeles, was then duly installed.

Dr. Justus A. Matthews, Rochester, Minn., read a paper on "Tonsillectomy, with Analysis of Four Thousand Cases." Discussed by Dr. Henry Horn, San Francisco.

Moved by Dr. Hill Hastings that a vote of thanks be extended to the officers of the Section for the fine program and for their efforts in bringing about a successful meeting. Seconded and carried.

Moved by Dr. George Cott, Buffalo, that a rising vote of thanks be extended to Dr. Norval H. Pierce for his work in presiding over the Section. Seconded and carried.

SECTION ON DISEASES OF CHILDREN

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order by the Chairman, Dr. Lawrence T. Royster, Norfolk, Va. He announced that since Drs. Isaac Abt and F. S. Churchill, of Chicago, two members of the Executive Committee, were not present, it would be necessary to appoint two members in their places. He therefore appointed Dr. F. C. Neff, Kansas City, Mo., and Dr. Langley Porter, San Francisco.

Dr. H. M. McClanahan, Omaha, presented the following resolution looking toward cooperation on the part of this section with other organizations working for the reduction of infant mortality.

WHEREAS, The problem of infant mortality occupies such an important place in pediatrics, and,

WHEREAS, Preventive work on the part of many organizations has been started for the purpose of helping to lower the death rate, and,

WHEREAS, Many of these are not guided or directed by proper authority in their pediatric affiliations, be it

Resolved, That the section on Diseases of Children request the Board of Trustees to form in that body a Council on Infant Mortality for the purpose of cooperation with other organizations.

Dr. L. T. Royster, Norfolk, delivered an address on "The Pediatrician and the Section on Diseases of Children." No discussion.

Dr. F. C. Neff, Kansas City, read a paper on "Recent Methods of Treating Diphtheria." Discussed by Drs. J. Zahorsky, St. Louis; L. Porter, San Francisco; A. A. O'Neil, San Francisco; H. D. Chapin, New York; J. McGavin, Portland, Ore.; J. A. Colliver, Los Angeles; W. W. Behlow, San Francisco; P. S. Roy, Washington, D. C.; William P. Lucas, San Francisco; L. T. Royster, Norfolk, Va.; F. C. Neff, Kansas City, Mo.

Dr. H. M. McClanahan, Omaha, read a paper on "Practical Value of the Examination of Stools in Infants." Discussed by Drs. J. I. Durand, Seattle; C. G. Grulee, Chicago; William P. Lucas, San Francisco; F. W. Schlutz, Minneapolis; L. Porter, San Francisco; J. Zahorsky, St. Louis; H. M. McClanahan, Omaha.

Dr. H. D. Chapin, New York, read a paper on "A Clinical Study of Pneumonia in Early Life." Discussed by Dr. F. C. Neff, Kansas City.

Dr. W. P. Lucas, San Francisco, read a paper on "The Problem of Unresolved Pneumonia in Infancy and Childhood." Discussed by Drs. H. D. Chapin, New York; L. Porter, San Francisco; F. C. Neff, Kansas City; J. P. Sedgwick, Minneapolis; E. C. Fleischner, San Francisco; J. A. Shreck, Redlands; W. P. Lucas, San Francisco.

THURSDAY, JUNE 24—MORNING

The meeting was called to order by the Chairman, Dr. L. T. Royster, who then asked for the report of the nominating committee with reference to the officers for the ensuing year.

Dr. H. D. Chapin, New York, reported that the nominating committee had selected the following officers: chairman, Dr. T. C. McCleave, Berkeley, Calif.; vice chairman, Dr. E. P. Copeland, Washington; secretary, Dr. F. P. Gengenbach, Denver; delegate, Dr. H. M. McClanahan, Omaha. A motion carried that the officers be accepted as nominated.

Dr. T. C. McCleave, Berkeley, Calif., stated that at the last meeting in Atlantic City this section appointed a Committee of Betterment. Dr. Hamill was one of the original members of that committee, and took up several matters of importance, among them the subject of the advertisement of proprietary infant foods. He was not able to be present at this time, and Dr. Sedgwick was appointed in his place. These advertisements advised mothers to give up nursing their children and advocated foods by the use of which infants were not scientifically fed. This, he said, was unfair to the medical profession, and he presented the following resolution in reference to the matter.

He also presented a resolution commending the work of the American Milk Commission.

The Committee on Betterment of the Section, Section on Diseases of Children, begs to submit the following for the consideration of the House of Delegates:

Whereas, The advertising of proprietary infant foods to the profession, and especially to the laity, is carried on by methods more insidious and objectionable than those used in the promulgation of proprietary drug preparations, and constitutes a serious obstacle to the propaganda for rational and scientific infant feeding, be it

Resolved, That proprietary infant foods proposed for advertisement in the publications of the American Medical Association shall be submitted to the Council on Pharmacy and Chemistry under the same conditions as apply to proprietary drug preparations.

Respectfully submitted.

J. P. Sedgwick.
F. S. Churchill.
T. C. McCleave.

The Committee on Betterment of the Section, Section on Diseases of Children, begs to submit the following for the consideration of the House of Delegates:

Whereas, The activity of the American Association of Medical Milk Commissions has resulted in the establishment of some seventy-five commissions in the United States and Canada, largely under the auspices of county medical societies, and there has thus been made available in many communities a certified milk designed for clinical purposes, which, at the same time, has greatly stimulated improvement in the general milk supply, to the consequent reduction of infant morbidity and mortality, be it

Resolved, That the House of Delegates commends the purpose of the American Association of Milk Commissions, and recommends to component societies the organization of medical milk commissions wherever warranted by local conditions.

Respectfully submitted.

J. P. Sedgwick.
F. S. Churchill.
T. C. McCleave.

Dr. H. M. McClanahan, Omaha, moved that these resolutions be adopted. Motion carried.

Dr. Philip S. Roy, Washington, D. C., stated that the work of this committee was very important and it should be continued; that this committee should be in close touch with the House of Delegates, and the new delegate should be added to the committee.

Dr. C. G. Grulee, Chicago, moved that this committee be made a standing committee of this section and that the delegate from this section be added to the committee. Motion carried. Dr. C. G. Grulee, Chicago, presented the following resolution:

Whereas, There is a journal of the diseases of children published by the American Medical Association that is upholding a very high standard and publishes the best medical material that this country produces, but which, it seems to us, is lacking in one factor of primary importance, namely, that it publishes no adequate abstracts of articles as is done in foreign journals; and

Whereas, In this country we have no journal, excepting one that is objectionable because of the character of the advertisements it carries, and many of those advertisements have been condemned by the American Medical Association; and

Whereas, This condition of affairs works to the disadvantage of the pediatric profession, since the pediatrician must go to foreign journals for a digest of pediatric literature, be it

Resolved, That it is the sense of the pediatric section of the American Medical Association that the *American Journal of Diseases of Children*, published by the American Medical Association, establish a department which will publish abstracts comprising not only those in our own language, but in every other language, and also abstracts of various meetings of pediatric societies in this country.

Dr. G. H. Clark, Waterloo, Iowa, read a paper on "Craniometry in Diseases of Children." Discussed by Drs. J. P. Sedgwick, Minneapolis; C. G. Grulee, Chicago; H. D. Chapin, New York; J. A. Colliver, Los Angeles; G. H. Clark, Waterloo.

Dr. G. H. Cattermole, Boulder, Colo., read a paper on "Tuberculin Tests in Children of Colorado." Discussed by Drs. C. G. Grulee, Chicago; L. Porter, San Francisco; H. D. Chapin, New York; E. Lackner, Chicago; J. I. Durand, Seattle; J. P. Sedgwick, Minneapolis; R. B. Sweet, Long Beach, Calif.; T. C. McCleave, Berkeley, Calif.; E. Lackner, Chicago; J. Ritter, Chicago; G. H. Cattermole, Boulder, Colo.

Dr. F. W. Schlutz and Dr. C. J. Pettibone, Minneapolis, presented a paper on "Quantitative Determinations of Nitrogen Elements in the Newborn," which was read by Dr. Schlutz. Discussed by Drs. L. Porter, San Francisco, and F. W. Schlutz, Minneapolis.

Dr. J. P. Sedgwick and Dr. W. P. Larson presented a paper on "Epidemic Abortion Reactions in Children," which was read by Dr. Sedgwick. Discussed by Drs. G. Lyman, San Francisco; J. I. Durand, Seattle; J. P. Sedgwick, Minneapolis.

Dr. J. S. Bardin, Fort Worth, Texas, read a paper on "Cerebrospinal Meningitis During the Texas Epidemic of 1912." Discussed by Drs. H. D. Chapin, New York; H. M. McClanahan, Omaha; L. Porter, San Francisco; J. S. Bardin, Fort Worth, Tex; H. D. Chapin, New York.

Thursday, June 24—Afternoon

The meeting was called to order by the Chairman, Dr. L. T. Royster, Norfolk, Va. Drs. Clifford C. Grulee and F. W. Gaarde, Chicago presented a paper on "Involvement of the Urinary Tract as the Result of Focal Infections in Children," which was read by Dr. C. G. Grulee. Discussed by Drs. W. D. Ludlum, Brooklyn; F. C. Neff, Kansas City, Mo.; L. T. Royster, Norfolk, Va.; C. G. Grulee, Chicago.

Drs. Langley Porter, A. Huffaker and A. Ritter, San Francisco, presented a paper read by Dr. Porter, San Francisco, on "Mental and Physical Survey of Supposedly Normal Children." Discussed by Drs. C. G. Grulee, Chicago; E. Merritt, San Francisco; A. Huffaker, San Francisco; H. M. McClanahan, Omaha; L. Porter, San Francisco.

Dr. H. H. Yerrington and Dr. Clyde T. Wetmore, San Francisco, presented a paper, read by Dr. H. H. Yerrington, on "Starch Digestion in Children, with Some Clinical Observations." Discussed by Drs. F. W. Schlutz, Minneapolis; H. D. Chapin, New York; C. G. Grulee, Chicago; L. Porter and H. H. Yerrington, San Francisco.

Dr. Walter Gellhorn, Seattle, read a paper on "Casein Milk Feeding in Infancy and Childhood." No discussion.

SECTION ON PATHOLOGY AND PHYSIOLOGY

Tuesday, June 22—Afternoon

The meeting was called to order at 2:10 p. m., by the Vice-Chairman, Dr. L. B. Wilson, Rochester, Minn.

Dr. Walter C. Alvarez, San Francisco, read a paper entitled "The Motor Functions of the Intestine from a New Point of View." Discussed by Drs. L. B. Wilson, Rochester, Minn., and Walter A. Alvarez, San Francisco.

Dr. W. T. Councilman, Boston, presented a paper, illustrated by slides, entitled "Torula Infection." Discussed by Drs. Rusk, Berkeley, Calif.; Karl Meyer, San Francisco; W. V. Brem, Los Angeles; William Ophuls, San Francisco, and Professor Councilman, Boston.

Dr. A. D. Hirschfelder, Minneapolis, read a paper entitled "Pathologic Physiology of Lead Colic and Its Relation to Experimental Therapeutics." Discussed by Drs. Seawell, Denver, and A. D. Hirschfelder, Minneapolis.

Dr. C. D. Spivak, Denver, read a paper entitled "Weighing Parts of the Living Body." Discussed by Drs. William Ophuls, San Francisco; T. Brailsford Robertson, Berkeley, Calif.; Joseph Erlanger, St. Louis, and C. D. Spivak, Denver.

Dr. G. H. Whipple, San Francisco, read a paper entitled "Intestinal Obstruction: The Chemical Nature of the Toxic Agent." Discussed by Drs. V. C. Vaughan, Ann Arbor, Mich.; Fred T. Murphy, St. Louis, and G. H. Whipple, San Francisco.

The Chairman appointed Drs. G. H. Whipple and Boardman additional members of the nominating board.

Thursday, June 24—Morning

L. B. Wilson, Vice-Chairman, called the section to order at 9:10 a. m.

Dr. Arthur H. Morse, San Francisco, read a paper entitled "Creatin and Creatinin Excretion During the Puerperium and Its Relation to the Involution of the Uterus." Discussed by Dr. T. Brailsford Robertson, Berkeley, Calif.

Dr. William Ophuls, San Francisco, presented the report of the Executive Committee, recommending the election of the following officers for 1916: Chairman, Dr. F. P. Gay, Berkeley, Calif.; Vice-Chairman, Dr. James Ewing, New

York; Secretary, Dr. Isabella C. Herb, Chicago; Delegate, Dr. A. W. Hewlett, Ann Arbor, Mich.; Alternate, Dr. R. M. Pearce, Philadelphia.

Besides, the Executive Committee recommended that from now on the services of the secretary be continued for three years. The report was, on motion duly seconded, unanimously adopted.

Dr. T. Brailsford Robertson, Berkeley, Calif., read a paper entitled "Globulin and Albumin Percentage Determination in Small Quantities of Blood Serum." Discussed by Drs. R. A. Kocher, San Francisco; F. P. Gay, and T. Brailsford Robertson, Berkeley, Calif.

Dr. Joseph Erlanger, St. Louis, read a paper entitled "Examination of Some of the Indirect Blood Pressure Principles." No discussion.

Dr. Paul Roth, Battle Creek, Mich., read a paper entitled "Estimation of Carbon-Dioxid Tension in Alveolar Air." No discussion.

Dr. William Carpenter MacCarty, Rochester, Minn., read a paper entitled "A New Classification of Tumors." Discussed by Drs. W. T. Councilman, Boston; A. W. Warthin, Ann Arbor, Mich.; D. Hopkinson, Milwaukee; W. V. Brem, Los Angeles; L. B. Wilson, Rochester, Minn., and William Carpenter MacCarty, Rochester, Minn.

Dr. R. A. Kocher, San Francisco, was, on motion, granted permission to read a paper entitled "Chemistry of Cancer." Discussed by Drs. G. H. Whipple, San Francisco, and R. A. Kocher, San Francisco.

THURSDAY, JUNE 24—AFTERNOON

Dr. Rachel L. Ash, San Francisco, read a paper entitled "Spinal Cord Tumors in Children." Discussed by Drs. L. B. Wilson, Rochester, Minn., and Rachel L. Ash, San Francisco.

Dr. K. F. Meyer, San Francisco, read a paper entitled "The Relation of Animal to Human Sporotrichosis." No discussion.

Dr. W. A. Sawyer, Berkeley, Calif., read a paper entitled "Efficiency of Various Antityphoid Vaccines." Discussed by Drs. G. E. Ebright, San Francisco; R. J. Nichols, San Francisco; E. S. Kilgore, and W. A. Sawyer.

Dr. John Nivison Force, Berkeley, Calif., read a paper entitled "Laboratory Diagnosis of Smallpox by Skin Reaction." Discussed by Drs. Allen F. Gillihan and John Nivison Force, Berkeley, Calif.

Dr. William Ophuls, San Francisco, read a paper entitled "Nephritis: A New Series of Cases." Discussed by Drs. Joseph von Werthin, San Francisco; Lawrence Selling, Portland, Ore., and William Ophuls, San Francisco.

Dr. C. H. Bailey, San Francisco, read a paper entitled "Atheroma and Other Lesions Produced in Rabbits by Cholesterol Feedings. Discussed by Drs. B. Jablons and C. H. Bailey, San Francisco.

Adjourned.

SECTION ON NERVOUS AND MENTAL DISEASES

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order at 2:30 p. m., the Chairman, Dr. Francis X. Dercum, Philadelphia, presiding.

Dr. Francis X. Dercum, Philadelphia, read the Chairman's Address: "Recent Aspects of Nervous and Mental Pathology." No discussion.

The Chairman appointed Drs. William A. Jones, Minneapolis, George H. Moody, San Antonio, and Ross Moore, Los Angeles, members of the Executive Committee, and Dr. James H. McBride, Pasadena, Calif., Delegate to the House of Delegates.

The Chairman appointed the following Nominating Committee: Drs. Charles R. Ball, St. Paul; H. C. McClenahan, San Francisco, and J. T. Fisher, Los Angeles.

Dr. Adolf Meyer, Baltimore, read a paper on "Objective Psychology and Psychopathology with Subordination of the Medically Useless Contrast of Mental and Physical." Discussed by Drs. Thomas J. Orbison, Los Angeles; Josephine A. Jackson, Pasadena, Calif.; Andrew L. Skoog, Kansas City, Mo.; Cecil E. Reynolds, Los Angeles, and Adolf Meyer, Baltimore.

Dr. Charles Lewis Allen, Los Angeles, read a paper on "Delusions of Persecution as a Biologic Defense Reaction." No discussion.

Dr. Mary Lawson Neff, Des Moines, Iowa, read a paper on "Serviceable Psychology." Discussed by Drs. Elizabeth Kearny, Los Angeles; Charles R. Ball, St. Paul; E. B. Hoag, Los Angeles; C. Eugene Riggs, St. Paul; W. J. G. Dawson, Eldridge, Calif.; H. L. Ewing, Lincoln, Neb., and Mary Lawson Neff, Des Moines, Iowa.

Dr. J. T. Fisher, Los Angeles, read a paper on "Traumatic Hysteria." Discussed by Drs. Thomas J. Orbison, Los Angeles; Charles L. Allen, Los Angeles; Walter F. Schaller, San Francisco; Andrew L. Skoog, Kansas City, Mo.; Charles R. Ball, St. Paul; Francis X. Dercum, Philadelphia, and J. T. Fisher, Los Angeles.

THURSDAY, JUNE 24—MORNING

The Nominating Committee offered the following report on nominations for the ensuing year: Chairman, Dr. George A. Moleen, Denver; Vice-Chairman, Dr. M. A. Bliss, St. Louis; Secretary, Dr. A. S. Hamilton, Minneapolis; Delegate, Dr. Milton B. Lennon, San Francisco; Alternate Delegate, Charles L. Allen, Los Angeles.

Approved on motion and carried.

Dr. W. A. Jones, Minneapolis, read a paper on "Myotonia Congenita." Discussed by Drs. Frank R. Starkey, Philadelphia; G. W. Robinson, Kansas City, Mo., and W. A. Jones, Minneapolis.

Dr. J. P. Munroe, Charlotte, N. C., read a paper on "Chronic Tetany; Report of Case." Discussed by Drs. J. T. Fisher, Los Angeles; J. M. Wolfsohn, San Francisco; Cecil E. Reynolds, Los Angeles; Josephine A. Jackson, Pasadena, Calif.; Frank R. Starkey, Philadelphia; George A. Moleen, Denver, and J. P. Munroe, Charlotte, N. C.

The following papers were read as a symposium:

Dr. T. H. Weisenburg, Philadelphia, and Dr. Philip Work, Pueblo, Colo., (read by Dr. Work), "The Diagnosis of Tumors in the Posterior Cranial Fossa."

Dr. Ernest G. Grey, Boston: "Cerebellar Tumor Without Nystagmus."

Dr. I. Leon Meyers, Chicago: "Galvanometric Studies of the Cerebellar Function."

The above papers were discussed by Drs. A. L. Skoog, Kansas City, Mo.; G. W. Robinson, Kansas City, Mo.; John S. Turner, Dallas, Tex.; Cecil E. Reynolds, Los Angeles; George A. Moleen, Denver; Philip Work, Pueblo, Colo.; Ernest Grey, Boston, and I. L. Meyers, Chicago.

Dr. Charles R. Ball, St. Paul, read a paper on "Focal Disease of the Brain: Report of Eight Cases." Discussed by Drs. C. Eugene Riggs, St. Paul; Cecil E. Reynolds, Los Angeles; D. M. Hansen, Lincoln, Neb.; George A. Moleen, Denver, and Charles R. Ball, St. Paul.

THURSDAY, JUNE 24—AFTERNOON

Dr. Benjamin T. Burley, Worcester, Mass., read a paper on "Acute Ascending Hemorrhagic Myelitis." Discussed by Drs. Charles R. Ball, St. Paul, and B. T. Burley, Worcester, Mass.

Dr. A. L. Skoog, Kansas City, Mo., read a paper on "Spinal Cord Compression from Leptomeningeal Cysts: Report of Two Cases." No discussion.

Dr. C. Eugene Riggs, St. Paul, read a paper on "Salvarsanized Serum in Syphilitic Nervous Disease." Discussed by Drs. G. W. Robinson, Kansas City, Mo.; C. R. Ball, St. Paul; Frank R. Starkey, Philadelphia; George H. Moody, San Antonio, Tex.; W. J. G. Dawson, Eldridge, Calif.; A. W. Hoisholt, Napa, Calif.; G. P. Sanborn, Boston; H. G. Brainerd, Los Angeles; Cecil E. Reynolds, Los Angeles; F. X. Dercum, Philadelphia; Philip Hillkowitz, Denver; W. A. Jones, Minneapolis; W. V. Brem, Los Angeles, and George A. Moleen, Denver.

Dr. Ross Moore, Los Angeles, read a paper on "Testing Muscular Tonus or Reflex Excitability in the Upper Extremity." No discussion.

SECTION ON DERMATOLOGY

TUESDAY, JUNE 22—AFTERNOON

The Chairman, Dr. Howard Fox, New York, called the meeting to order at 2:20 p. m. Dr. Fox expressed his appreciation of the honor conferred in electing him to the high office which had been held by Dr. Zeisler and Dr. Sutton, and he thanked Dr. H. H. Hazen, secretary, for energetic, kind and cordial cooperation, and the San Francisco gentlemen for their kindness in providing the section with a symposium on leprosy.

Dr. Howard Fox, New York, then read the Chairman's Address entitled "Dermatology of the Ancients."

The Chairman designated the following Nominating Committee: Dr. A. Ravogli, Dr. A. J. Markley and Dr. George Miller MacKee.

Dr. Joseph Zeisler, Chicago, read a paper on "An Uncommon Case of Multiple Sarcoid of the Skin." Discussed by Dr. Richard L. Sutton, Kansas City, Mo.

Dr. A. Ravogli, Cincinnati, read a paper on "The Treatment of Burns." Discussed by Drs. W. A. Pusey, Chicago; Joseph Zeisler, Chicago; Ernest Dwight Chipman, San Francisco, and A. Ravogli, Cincinnati.

Dr. Richard L. Sutton, Kansas City, Mo., read a paper on "Symptomatology and Treatment of Some Common Palmar Eruptions." Discussed by Drs. A. Ravogli, Cincinnati; W. A. Pusey, Chicago; Howard Morrow, San Francisco; Ernest Dwight Chipman, San Francisco; Douglas W. Montgomery, San Francisco; Howard Fox, New York; E. S. Lain, Oklahoma City; A. J. Markley, Denver; J. C. Pickett, San Francisco; George D. Culver, San Francisco; Richard L. Sutton, Kansas City, Mo., and Howard Fox, New York.

Dr. George D. Culver, San Francisco, read a paper on "Lupus Erythematosus of the Mucous Membranes." Discussed by Drs. Joseph Zeisler, Chicago; Everett S. Lain, Oklahoma City; J. B. Kessler, Iowa City, Iowa; W. A. Pusey, Chicago; Douglas W. Montgomery, San Francisco; A. Ravogli, Cincinnati; A. J. Markley, Denver; H. H. Hazen, Washington, D. C.; Ernest Dwight Chipman, San Francisco, and George D. Culver, San Francisco.

THURSDAY, JUNE 24—MORNING

The Nominating Committee presented its report, placing in nomination the following names: Chairman, Dr. Howard Morrow, San Francisco; Vice-Chairman, Dr. Everett S. Lain, Oklahoma City; Delegate, Dr. Ernest Dwight Chipman, San Francisco; Alternate, Dr. George Miller MacKee, New York.

On motion, the secretary cast one ballot for the nominees presented by Dr. Ravogli, chairman of the Nominating Committee, which motion being carried, the chairman declared the members elected to the respective offices mentioned.

A recess was taken for five minutes to receive and arrange twelve patients produced by Dr. Howard Morrow from the Isolation Hospital, San Francisco.

The Chair reconvened the section, and the following papers were read as a Symposium on Leprosy:

Dr. Douglass W. Montgomery, San Francisco, "Historical Review of Leprosy."

Drs. Howard Morrow and A. W. Lee, San Francisco, "Symptomatology and Diagnosis of Leprosy, with Presentation of Cases."

Dr. Ernest Dwight Chipman, San Francisco, "Treatment of Leprosy."

Dr. A. A. O'Neill, San Francisco, "Public Control of Lepers."

Dr. Harry E. Alderson, San Francisco, "Demonstration of Cases from the Skin Clinic of the Stanford University Medical School."

These papers were discussed by Drs. Joseph Zeisler, Chicago; George W. McCoy, Honolulu; Capt. H. J. Nichols, U. S. Army; A. Ravogli, Cincinnati; Richard L. Sutton, Kansas City, Mo.; Schmidt; Everett S. Lain, Oklahoma City; Howard Fox, New York; Douglass W. Montgomery, San Francisco; Howard Morrow, San Francisco; A. W. Lee, San Francisco; A. A. O'Neill, San Francisco, and Ernest Dwight Chipman, San Francisco.

Dr. Harry E. Alderson, San Francisco, exhibited a number of patients, giving history and treatment. Discussed by Drs. George Miller MacKee, New York; Oliver S. Ormsby, Chicago; Joseph Zeisler, Chicago; Everett S. Lain, Oklahoma City; Richard L. Sutton, Kansas City, Mo.; A. J. Markley, Denver; Ernest Dwight Chipman, San Francisco, and Harry E. Alderson, San Francisco.

THURSDAY, JUNE 24—AFTERNOON

The Chairman called the section to order at 2:10 p. m., and invited Vice-Chairman Dr. Ravogli to take the chair.

Dr. Oliver S. Ormsby, Chicago, read a paper on "Fictitious Dermatoses." Discussed by Drs. Howard Morrow, San Francisco; Hart; George Miller MacKee, New York; A. J. Markley, Denver; Oliver S. Ormsby, Chicago.

Dr. A. J. Markley, Denver, read a paper on "Acanthosis Nigricans as an Indication of Internal Malignancy." Discussion by Dr. Oliver S. Ormsby, Chicago.

Dr. J. B. Kessler, Iowa City, Iowa, read a paper on "Xeroderma Pigmentosum: Its Treatment with Autogenous Serum." (Dr. Fox returned to the chair.) Discussed by Drs. Oliver S. Ormsby, Chicago, and J. B. Kessler, Iowa City, Iowa.

Dr. H. H. Hazen, Washington, D. C., read a paper on "Cutaneous Cancer of the Extremities." Discussed by Drs. A. Ravogli, Cincinnati; Richard L. Sutton, Kansas City, Mo.; Douglass W. Montgomery, San Francisco; Harry E. Alderson, San Francisco; George Miller MacKee, New York; Everett S. Lain, Oklahoma City; Howard Fox, New York, and H. H. Hazen, Washington, D. C.

Dr. George Miller MacKee, New York, read a paper on "The Present Status of the Roentgen Ray in the Treatment of Diseases of the Skin."

Dr. Everett S. Lain, Oklahoma City, read a paper on "Radiant Energy in the Treatment of Diseases of the Skin."

These two papers were discussed by Drs. Richard L. Sutton, Kansas City, Mo.; Ernest Dwight Chipman, San Francisco; Douglass W. Montgomery, San Francisco; H. H. Hazen, Washington, D. C.; Harry E. Alderson, San Francisco; George Miller MacKee, New York, and Everett S. Lain, Oklahoma City.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order by the temporary chairman, Dr. W. C. Rucker, Washington, D. C.

Dr. A. F. Gillihan, Oakland, Calif., was elected delegate to the House of Delegates.

Dr. W. C. Rucker delivered an address of welcome.

Dr. William B. Wherry, Cincinnati, read a paper on "A Plaguelike Disease of California Rodents, Affecting Man." Discussed by Drs. G. W. McCoy, Honolulu, T. H.; N. S. Wayson, San Francisco, and Nathan Barlow, Cuyamel, S. Honduras.

On motion of Dr. M. P. Ravenel, Columbia, Mo., seconded by Dr. B. Franklin Royer, Harrisburg, Pa., the following resolution was adopted and presented to the House of Delegates:

WHEREAS, The American Association of Medical Milk Commissions through its nine years of existence has fostered the establishment of some eighty medical milk commissions by county medical societies; and,

WHEREAS, These milk commissions, now an activity of our organizations the county medical societies, have uniformly crystallized public sentiment in favor of pure milk, and indirectly, through public interest in the same, have been able to bring about better health administration; therefore be it

Resolved, That the House of Delegates recommend this activity to county societies, and to this end the Council on Health and Public Instruction issue a bulletin on the "Organization and Purpose of Medical Milk Commissions."

Dr. W. C. Rucker, Washington, D.C., read a paper, by himself and Dr. Samuel G. Dixon, Philadelphia, entitled "The Sanitary Engineer in Public Health Work." No discussion.

Dr. John W. Kerr, Washington, D. C., read a paper on "The Full-Time Health Officer." Discussed by Drs. James A. Hayne, Columbia, S. C.; A. F. Gillihan, Oakland, Calif.;

Adelaide Brown, Sacramento, Calif.; J. N. Force, Berkeley, Calif.; William Simpson, San José, Calif.; M. P. Ravenel, Columbia, Mo.; B. Franklin Royer, Harrisburg, Pa.; T. D. Tuttle, Seattle; Otto P. Geier, Cincinnati, and O. B. Nesbit, Gary, Ind.

On motion of Dr. Otto P. Geier, duly seconded, a resolution was carried that a committee of three, of which Dr. John W. Kerr be chairman, be appointed by the temporary chairman to draft a resolution, to be presented to the House of Delegates, calling on the Council on Health and Public Instruction to include in its propaganda the advocacy of the full-time health officer.

The temporary chairman appointed as a committee on resolutions Drs. John W. Kerr, A. F. Gillihan and Otto P. Geier; and as a committee on nomination of officers, Drs. William Simpson, San José, Calif.; N. K. Foster, Oakland, Calif., and B. Franklin Royer, Harrisburg, Pa.

THURSDAY, JUNE 24—MORNING

The report of the Committee on Nominations, which was adopted, was as follows: Chairman, Dr. William C. Rucker, Washington, D. C.; Vice President, Dr. James Adams Hayne, Columbia, S. C.; Secretary, Dr. Otto P. Geier, Cincinnati; Delegate, Dr. Eugene R. Kelly, Seattle.

The following papers were read as a Symposium on Industrial Sanitation:

Dr. Otto P. Geier, Cincinnati: "Introductory Remarks: Industrial Sanitation—The New Factor in Public Health."

Dr. Sidney Morrill McCurdy, Youngstown, Ohio: "Physical Examination of Employees."

Dr. William F. Snow, Sacramento: "Occupations and the Venereal Diseases."

Dr. B. S. Warren, Washington, D. C.: "Sickness Insurance."

These four papers were discussed by Mr. Frederick L. Hoffman, Newark, N. J.; Drs. G. M. Kober, Washington, D. C.; R. W. Corwin, Pueblo, Colo.; G. H. Richardson, San Francisco; G. H. Taubles, San Francisco; W. C. Rucker, Washington, D. C.; Leo Munter, San Francisco; G. H. Chamberlain, Jr., New York; Mary Lawson Neff, Des Moines, Ia.; Otto P. Geier, Cincinnati; S. M. McCurdy, Youngstown, Ohio; William F. Snow, Sacramento, and John W. Kerr, Washington, D. C.

A motion was duly carried that the chairman appoint a committee on Industrial Sanitation, to report to the section at its next meeting.

THURSDAY, JUNE 24—AFTERNOON

Mr. Sherman C. Kingsley, Chicago, read a paper on "Some Medical Aspects of the Open-Air School." Discussed by Drs. B. Franklin Royer, Harrisburg, Pa.; N. K. Foster, Oakland, Calif.; F. E. Corey, Alhambra, Calif.; Heman Spalding, Chicago; Burt Howard, Sacramento, Calif., and Otto P. Geier, Cincinnati.

Dr. William C. Hassler, San Francisco, read a paper on "The Administration and Control of Communicable Diseases by a City Health Department." Discussed by Drs. Jackson Temple, Santa Rosa, Calif., and W. C. Rucker, Washington, D. C.

Dr. W. C. Rucker, Washington, D. C., read a paper on "The Relation of Rodent Plague to Human Infection." Discussed by Dr. William C. Hassler, San Francisco.

Dr. Anna Wessels Williams, New York, read a paper on "Significance and Prevention of Amebic Infections in Mouths of Children." Discussed by Drs. Woods Hutchinson and C. C. Bass, New Orleans.

The Chairman announced the appointment of Drs. J. W. Kerr (Chairman), Washington, D. C.; Otto P. Geier, Cincinnati, and S. M. McCurdy, Youngstown, Ohio, as a committee on Industrial Sanitation, to make a report at the next meeting.

Dr. B. Franklin Royer, Harrisburg, Pa., read a paper written by himself and Dr. Samuel G. Dixon, Harrisburg, Pa., on "The Sanitary Engineer in Public Health." Discussed by Dr Victor C. Vaughan, Ann Arbor, Mich.

SECTION ON GENITO-URINARY DISEASES

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order at 2:15 p. m., the Chairman, Dr. Granville MacGowan, Los Angeles, presiding.

Dr. George S. Whiteside, Portland, Ore., read a paper on "Prostatectomy, Mistakes and Failures." Discussed by Drs. A. B. Cecil, Los Angeles; Sherman Peterkin, Seattle; L. W. Bremerman, Chicago; J. I. Butler, Tucson, Ariz.; Hiram R. Loux, Philadelphia, and George S. Whiteside, Portland, Ore.

Dr. W. F. Braasch, Rochester, Minn., read a paper by himself and Dr. A. B. Moore, Rochester, Minn., on "Clinical Observations on Stone in the Ureter." No discussion.

Dr. Frank Hinman, San Francisco, read a paper on "Urinary Antisepsis: A Clinical and Bacteriologic Study."

Dr. Victor G. Vecki, San Francisco, read a paper on "Local Application of Fuchsin in the Urethra and Bladder."

These two papers were discussed by Drs. J. A. Fulton, Astoria, Ore.; Herman L. Kretschmer, Chicago, and W. F. Braasch, Rochester, Minn.

Dr. Hiram R. Loux, Philadelphia, read a paper on "Plastic Operations on Ureters and Kidney Pelves."

Dr. W. Howard Barber, New York, read a paper on "An Entero-Ureteral Operation."

Dr. Hugh Cabot, Boston, read a paper on "Stone in the Ureter: A Critical Review of Cases."

These three papers were discussed by Drs. R. C. Coffey, Portland, Ore.; Bransford Lewis, St. Louis; Frank Hinman, San Francisco; W. K. Draper, New York; Herman L. Kretschmer, Chicago; Hugh Cabot, Boston; George Eaton, San Francisco; W. F. Braasch, Rochester, Minn.; Hiram R. Loux, Philadelphia; W. Howard Barber, New York, and A. J. Crowell, Charlotte, N. C.

Dr. A. J. Crowell, Charlotte, N. C., read a paper on "Importance of Thorough Examination in Urologic Cases." No discussion.

THURSDAY, JUNE 24—MORNING

The following officers were elected for the ensuing year: Chairman, Dr. Louis E. Schmidt, Chicago; Vice Chairman, Francis McCullum, Kansas City; Secretary, Dr. W. F. Braasch, Rochester, Minn.; Delegate, Dr. Martin Krotoszyner, San Francisco, and Alternate, Dr. G. Sherman Peterkin, Seattle.

Dr. Lewis Wine Bremerman, Chicago, read a paper on "Effect of Trauma on the Genito-Urinary Tract." Discussed by Drs. W. F. Braasch, Chicago; George S. Whiteside, Portland, Ore.; William J. Pennock, Spokane, Wash.; Martin Krotoszyner, San Francisco; Louis E. Schmidt, Chicago; Stanley R. Woodruff, Bayonne, N. J.; John R. Barber, Fort Huachuca, Ariz.; Granville MacGowan, Los Angeles; G. Sherman Peterkin, Seattle, Wash., and L. W. Bremerman, Chicago.

Dr. G. Sherman Peterkin, Seattle, read a paper on "Diagnosis of Genito-Urinary Conditions in Women by Means of the Roentgen Ray." Discussed by Drs. George S. Whiteside, Portland, Ore.; L. W. Bremerman, Chicago; G. H. Mize, San Francisco; Louis E. Schmidt, Chicago, and G. Sherman Peterkin, Seattle, Wash.

Dr. Martin Krotoszyner, San Francisco, read a paper by himself and Dr. George W. Hartman, San Francisco, on "Blood Cryoscopy and Blood Urea: A Comparative Study of Renal Function." Discussed by Drs. Arthur B. Cecil, Los Angeles; William E. Stevens, San Francisco; Edgar G. Ballenger, Atlanta, Ga.; Frank Hinman, San Francisco; George W. Hartman, San Francisco; William F. Braasch, Rochester, Minn.; Fred R. Charlton, Indianapolis; Louis E. Schmidt, Chicago; A. J. Crowell, Charlotte, N. C.; Granville MacGowan, Los Angeles, and Martin Krotoszyner, San Francisco.

Dr. Robert V. Day, Los Angeles, read a paper on "Destroying Limited Obstructive Glandular Growths in the Posterior Urethra by the High Frequency Current." Discussed by Drs. Stanley R. Woodruff, Bayonne, N. J.; W. P. Willard, San Francisco; Granville MacGowan, Los Angeles, and Robert V. Day, Los Angeles.

THURSDAY, JUNE 24—AFTERNOON

The Chairman read his address. No discussion.

Dr. Carl C. Warden, Ann Arbor, Mich., read a paper on "Vaccine in Gonococcus Infections." Discussed by Drs. J. A. Fulton, Astoria, Ore.; Frank Hinman, San Francisco; John C. Spencer, San Francisco; L. H. Wolf, Louis E. Schmidt, L. W. Bremerman, Chicago; Fred R. Charlton, Indianapolis; Granville MacGowan, Los Angeles, and Carl C. Warden, Ann Arbor, Mich.

Dr. Arthur B. Cecil, Los Angeles, read a paper on "The Mechanism of Urination." Discussed by Drs. Martin Krotoszyner, San Francisco, and Arthur B. Cecil, Los Angeles.

Dr. W. J. Pennock, Spokane, Wash., read a paper on "Verumontanitis." Discussed by Drs. Edgar G. Ballenger, Atlanta, Ga., and W. J. Pennock, Spokane.

The Chair appointed Dr. Edgar G. Ballenger as a member of the Publication Committee.

SECTION ON HOSPITALS

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order by the Acting Chairman, Dr. William H. Walsh, Philadelphia, at 2:20 p. m.

Dr. Walsh read the Chairman's address, entitled "Relation of the Hospital to the Community."

The following papers were read as a Symposium on "Venereal Diseases":

Mr. Michael M. Davis, Jr., Boston, read a paper entitled "Efficient Dispensary Clinics a Requisite for Adequate Coping with Venereal Disease." No discussion.

Dr. Robert T. Legge, Berkeley, Calif., read a paper entitled "The Control of Venereal Diseases by Health Authorities." Discussed by Dr. John A. Hornsby, Chicago.

Dr. Calvin S. White, Portland, Ore., read a paper entitled "The Problem of Venereal Disease Quackery." No discussion.

Dr. Robert J. Wilson, New York City, read a paper entitled "Venereal Disease Clinics in New York and a Statistical Efficiency Test." Discussed by Drs. W. S. Snow, New York; John A. Hornsby, Chicago; Robert J. Wilson, New York; Calvin S. White, Portland, Ore.; Robert T. Legge, Berkeley, Calif., and by Mr. Michael M. Davis, Jr., Boston.

Dr. W. S. Snow introduced the following resolution:

Resolved, That we further the extension of the equipment of municipal and state boards of health, and of hospital dispensaries, to include facilities for early diagnosis for the necessary treatment of men and women, as now being practical measures for the reduction of venereal diseases; be it further

Resolved, That when practicable, these diseases be reported; be it further

Resolved, That, since prostitution is largely responsible for the transmission of venereal diseases, we approve of the efforts to steadily repress prostitution; be it further

Resolved, That effective measures be promoted against venereal disease charlatans.

The resolution was seconded and unanimously adopted.

THURSDAY, JUNE 24—MORNING

The meeting was called to order by the Acting Chairman, Dr. William H. Walsh, Philadelphia, at 9:30 a. m.

Dr. L. W. Littig, Davenport, Iowa, was unanimously elected Chairman.

Dr. Joseph M. Spellissy, Philadelphia, read a paper entitled "The Efficiency Standard at St. Joseph's Hospital, Philadelphia." Discussed by Drs. L. W. Littig, Davenport, Iowa, and John A. Hornsby, Chicago.

Dr. L. W. Littig, Davenport, Iowa, read a paper entitled "Important Elementary but Often Neglected Details in the Administration of Small Hospitals." Discussed by Drs. Joseph M. Spellissy, Philadelphia; I. D. Webster, San Diego, Calif., and William H. Walsh, Philadelphia.

THURSDAY, JUNE 24—AFTERNOON

Dr. W. P. Lucas, San Francisco, read for Dr. Arthur A. Howard, Boston, a paper entitled "Hospital Efficiency as Produced and Measured by a Fellow-Up System." No discussion.

Dr. H. W. Van Allen, Springfield, Mass., read a paper entitled "The Relation of the Roentgenologist to the Hospital." Discussed by Drs. A. R. Warner, Cleveland; Joseph M. Spellissy, Philadelphia, and William H. Walsh, Philadelphia.

Dr. A. R. Warner, Cleveland, read a paper entitled "The Experience of Lakeside Hospital in the Manufacture and Administration of Nitrous Oxid for Anesthesia." No discussion.

SECTION ON ORTHOPEDIC SURGERY

TUESDAY, JUNE 22—AFTERNOON

The meeting was called to order at 2 p. m. by the chairman, Dr. Nathaniel Allison, St. Louis.

Dr. Allison then read the chairman's address, entitled "Orthopedic Surgery and the Crippled." No discussion.

Dr. Fred J. Fassett, Seattle, read a paper on "Late Results of Excision of the Transverse Process of the Fifth Lumbar Vertebra." Discussed by Drs. M. S. Henderson, Rochester, Minn.; E. W. Ryerson, Chicago; Wallace Blanchard, Chicago; Roland O. Meisenbach, Buffalo, and J. P. Lord, Omaha.

Dr. H. L. Langnecker, Boston, read a paper on "Lesions of the Lumbo-Sacro-Iliac Region." Discussed by Drs. C. C. Crane, San Francisco; Fred J. Fassett, Seattle; Leonard W. Ely, San Francisco; J. T. Rugh, Philadelphia; John Ridlon, Chicago; C. E. McClure, Seattle; Roland O. Meisenbach, Buffalo, and C. L. Lowman, Los Angeles.

Dr. M. S. Henderson, Rochester, Minn., read a paper on "Surgical Treatment of Bunions (Mayo Method)." Discussed by Drs. E. W. Ryerson, Chicago; John Ridlon, Chicago; J. P. Lord, Omaha; John F. Golden, Chicago; Leonard W. Ely, San Francisco; J. T. Rugh, Philadelphia, and B. M. J. Conlin, Long Beach, Calif.

The following papers were read as a symposium on "Congenital Hip Dislocation":

Dr. Russell A. Hibbs, New York: "Anteversion of Neck of Femur Causing Failure in Treating Congenital Hip Dislocation."

Dr. James T. Watkins, San Francisco: "Congenital Dislocations of the Hip, Reduced by Manipulation Followed by Arthrotomy."

Dr. Wallace Blanchard, Chicago: "Structural Changes in Congenital Hip Dislocations."

Discussed by Drs. John Ridlon, Chicago, and Leonard W. Ely, San Francisco.

THURSDAY, JUNE 24—MORNING

Minutes of the 1914 meeting of the Section were approved as read.

Nomination and election of officers for the ensuing year resulted as follows: Chairman, Dr. Russell A. Hibbs, New York; Vice-Chairman, Dr. E. W. Ryerson, Chicago; Secretary, Dr. Emil S. Geist, Minneapolis; Delegate to the House of Delegates, Dr. John Ridlon, Chicago; Alternate, Leonard W. Ely, San Francisco.

Report of Committee on "Therapeutic Methods and Results in Joint Tuberculosis" approved as read.

Motion made, seconded and unanimously passed that the above committee be continued, and that the chairman be allowed to change its personnel with the consent of the committee.

Dr. Henry W. Frauenthal, New York, read a paper on "Painful Feet." Discussed by Drs. Robert W. Lovett, Boston; John Ridlon, Chicago; Emil S. Geist, Minneapolis; Roland O. Meisenbach, Buffalo; E. A. Rich, Tacoma; Fred J. Fassett, Seattle, and E. W. Ryerson, Chicago.

Dr. Leonard W. Ely, San Francisco, read a paper on "Tuberculosis and Red Marrow." Discussed by Drs. Emil S. Geist, Minneapolis, and John Cowan, San Francisco.

Dr. Robert W. Lovett, Boston, read a paper on "Roentgenographic Characteristics of the Bone Changes in Rickets."

Discussed by Drs. H. W. Frauenthal, New York; Roland O. Meisenbach, Buffalo, and H. R. Allen, Indianapolis.

Dr. D. B. Phemister, Chicago, read a paper on "Subperiosteal Resections in Osteomyelitis." Discussed by Drs. Thomas W. Huntington, San Francisco; J. P. Lord, Omaha; Leonard W. Ely, San Francisco; E. W. Ryerson, Chicago; Roland O. Meisenbach, Buffalo; James Franklin Smith, San Francisco, and J. T. Rugh, Philadelphia.

THURSDAY, JUNE 24—AFTERNOON

Dr. Roland O. Meisenbach, Buffalo, read a paper on "Knee Joint Disability Caused by Hypertrophy of the Alar Ligaments." Discussed by Drs. Fred J. Fassett, Seattle, and J. T. Rugh, Philadelphia.

Dr. J. W. Cokenower, Des Moines, Iowa, read a paper on "Treatment of Fractures of Long Bones from an Orthopedic Point of View, with Clinical Observations and Conclusions." Discussed by Drs. Roland Hammond, Providence, R. I., and Roland O. Meisenbach, Buffalo.

Dr. H. R. Allen, Indianapolis, read a paper on "Fractures—New Ideas and New Instruments." Discussed by Drs. P. C. H. Pahl, Los Angeles, and H. M. Sherman, San Francisco.

Dr. Walter Baldwin, San Francisco, read a paper on "Syphilis of the Spine." Discussed by Drs. Henry W. Frauenthal, New York; James L. Whitney, San Francisco; D. B. Phemister, Chicago, and Carl C. Crane, San Francisco.

Dr. S. L. Haas, San Francisco, read a paper on "Experimental Transplantation of the Epiphysis with Observations on the Longitudinal Growth of Bone." Discussed by Drs. D. B. Phemister, Chicago; J. T. Rugh, Philadelphia, and Roland O. Meisenbach, Buffalo.

Dr. George J. McChesney, San Francisco, read a paper on "Juvenile Osteochondritis of the Hip Joint—Report and Exhibition of Three Patients." Discussed by Dr. H. M. Sherman, San Francisco.

The following papers were read as a symposium on "Arthritis":

Dr. Roland Hammond, Providence, R. I.: "Rôle of the Nose, Throat and Accessory Sinuses in Etiology of Chronic, Infectious Arthritis."

Dr. Thomas B. Hartzell, Minneapolis: "The Clinical Type of Arthritis Originating About the Teeth." Discussed by Drs. J. W. Cokenower, Des Moines, Ia.; Emil S. Geist, Minneapolis; Henry W. Frauenthal, New York; H. R. Allen, Indianapolis; M. C. Harding, San Diego, and J. P. Lord, Omaha.

[NOTE.—The roll of the House of Delegates will appear under Association News in the issue of THE JOURNAL for July 10. The minutes of the Section on Ophthalmology, and of the Section on Obstetrics, Gynecology and Abdominal Surgery, were not received in time for publication in this issue.]

THE REGISTRATION AT SAN FRANCISCO

The total registration at the San Francisco Session was 2,315.

REGISTRATION BY SECTIONS

Practice of Medicine	607
Surgery	588
Obstetrics, Gynecology and Abdominal Surgery	177
Ophthalmology	129
Laryngology, Otology, Rhinology	109
Diseases of Children	85
Pharmacology and Therapeutics	4
Pathology and Physiology	89
Stomatology	42
Nervous and Mental Diseases	81
Dermatology	34
Preventive Medicine and Public Health	110
Genito-Urinary Diseases	57
Hospitals	26
Orthopedic Surgery	43
Registrations without specifying any one section, Foreign guests and others who registered	134

Society Proceedings

ASSOCIATION OF AMERICAN PHYSICIANS

Thirtieth Annual Meeting, held at Washington, D. C., May 11-13, 1915

(*Continued from page 52*)

Open-Air Treatment of Pneumonia and Anemia in Children

DR. ROWLAND C. FREEMAN, New York: The best results in Roosevelt Hospital, compared with controls in the ward, were in cold weather. No increase of blood pressure was noted as a result of outdoor treatment; the most marked results were increased color in the cheeks, diminished cough and better sleep. There was reduced spread of contagion; there have been cases of measles on the roof without spread. Greatest interest centered in three cases of blood abnormalities treated in this way. 1. In a child with simple anemia (25 per cent. hemoglobin), bronchitis and colitis, the red cell count of 280,000 went to above 1,000,000 in a surprisingly short time. This child was given also syrup of ferrous iodid, but the improvement was out of all proportion to the drug given. 2. A child with leukemia had rapid improvement of lungs, spleen and blood. 3. A child with splenic anemia, showing normoblasts, megaloblasts, 60,000 white cells, etc., improved rapidly on the roof, relapsed when returned to the ward, and improved again when put outdoors. In 120 cases of pneumonia treated in the open air, twenty-one cases of uncomplicated lobar pneumonia had normal temperature in three days after admission; the mortality of the lobar pneumonia cases was 4.1 per cent.; thirty-one cases of bronchopneumonia were normal seven days after admission; the mortality in this form was 3.4 per cent.

Pain in Diaphragmatic Pleurisy

DR. JOSEPH A. CAPPS, Chicago: Pain as symptomatic of pleural lesions has been studied by mechanically irritating the membrane in thoracentesis operations. The visceral layer is not responsive to pain; the parietal pleura is very responsive to irritation, and the sense of location is precise; the diaphragmatic pleura is sensitive, but the pain is referred from the marginal area to the abdomen, and from the central area to the neck. This experimental work has been supplemented by clinical observations on diaphragmatic pleurisy in thirty-two cases of simple pleurisy and twenty-nine of pleuro-pneumonia. There was referred abdominal pain in fifty-four cases, of the same character as that produced experimentally. A phenomenon not noticed in the experiments was that in 50 per cent. of the cases the point of maximum pain corresponded with the point of maximum tenderness to pressure. The most common points of referred pain in the abdomen are above and to the right or left of the navel. There was referred neck pain in thirty-one cases. This had the same characteristics as the abdominal pain; the painful spots appear mostly along the ridge of the trapezius. In the neck the points of maximum pain and tenderness always coincide. Nine of the cases were at first diagnosed appendicitis; in two, operations were performed with negative findings. Six were called cholecystitis, and operations performed in two with negative findings; two were called ulcer of the stomach, and operation performed in one; two, abscess of liver, and operation performed in one; one, renal calculus; one, lumbago; one, abdominal inflammation of uncertain character.

Subphrenic inflammations give rise to direct pain as well as to referred abdominal pain; the neck pain gives no evidence as between subphrenic and supraphrenic inflammation.

Clinical Studies of Several Types of Acute Leukemic States

DRS. L. F. BARKER and W. A. BAETJER, Baltimore: Our studies cover twenty-one cases of acute leukemia recently under treatment. The disease is recognized to be not only a change in the total cell count but also a specific change in the blood-making organs. Acute and chronic forms are seen: the acute cases terminate fatally early as a rule; in those of

the chronic variety, the patients live longer. The chronic cases may begin with acute manifestations, or the disease may have an abrupt acute termination after a long chronic course. The acute cases are more often recognized now because the blood is studied oftener. They are sometimes mistaken for acute sepsis; but in any such cases associated with stomatitis and hemorrhagic diathesis, acute leukemia should be suspected. It is necessary for diagnosis to consider both the clinical course and the blood. The exact type may require postmortem histologic study for classification. There may be at the beginning and end, not a leukemia, but a leukopenia.

DISCUSSION

DR. JOSEPH L. MILLER, Chicago: What are the differential points between myeloblasts and large myelocytes?

DR. THOMAS ORDWAY, Boston: In the aleukemic stages, it is difficult to say that these cases are really leukemia. Differentiation between myelocytes and lymphocytes may be decided by the oxidase reaction. In numerous cases of myelogenous leukemia, citrated blood develops a buffy coat, from yellow to apple green, such as may be seen in the blood of chloroma, which many believe to be a form of leukemia which has left the blood and located by metastasis in the bones. In the treatment of leukemia by radium there has been no success in the acute, fulminant type. In more chronic cases, radium acts like the Roentgen rays, but with more striking results. Most of the cases treated unsuccessfully with the Roentgen rays or benzene (C_6H_6), when treated with radium over the spleen had remissions.

DR. FRANK BILLINGS, Chicago: I should like to ask Dr. Barker whether any of his cases of acute leukemia of the infectious type had actual foci of infection anywhere? I have in mind a case with an infection of the jaw, in which acute myeloid leukemia developed; also two cases of gangrenous infection of the throat followed by acute lymphoid leukemia. I recall also a case of typical Hodgkin's disease in which the glands of the neck suppurated after salvarsan therapy. The glands finally healed; the patient improved for a time, and then died in an acute septic state with the blood picture of acute lymphoid leukemia.

DR. J. B. HERRICK, Chicago: Dr. Barker referred to a condition which he called acute infectious lymphemia. I am convinced that there is an acute lymphatic leukemia from which recovery is possible. I have in mind a young man who had 30,000 leukocytes, the majority of which were lymphocytes; he got entirely well.

DR. ALFRED STENGEL, Philadelphia: I believe that many cases now called acute lymphocytic leukemia will hereafter be called myeloblastic forms. The digestive power found in myelocytes and myeloblasts is a useful differential criterion. Differentiation by selective staining is not altogether satisfactory. As to the possibility of acute infectious lymphemia being recognized, large series of these cases are now being published. Cases I have seen could not be told from acute lymphatic leukemia; the result alone tells the tale. All the true leukemias terminate fatally despite treatment.

DR. S. J. MELTZER, New York: I wish to ask Dr. Barker whether so-called Auer bodies were absent in these cases? I have in mind a case at Johns Hopkins in which Auer described peculiar rod-shaped bodies. Pappenheim has said that he has observed such bodies, and Ottenberg has found similar corpuscles in three cases. Dr. Auer has not wished to push a claim of priority for this observation, but it would seem that he is entitled to it.

DR. L. F. BARKER, Baltimore: Proper reference is made in the paper to the work of Auer and others. The differentiation between myeloblast and large myelocyte is difficult. Naegeli refers to the myeloblast as an unripe, ungranulated bone marrow cell. There is a complex heteroplastic series of events in the development of cells, and the differentiation between these cells, as between lymphocyte and lymphoidocyte, depends largely on the recognition of differences of nuclear structure especially when seen in a series of transition forms under diverse staining. The chemical and enzyme differences are also important. The treatment of these formidable blood diseases is disappointing; radium may hold out some hope. The patients usually die, except in the cases of acute infectious lymphemia.

Colloid Carcinoma of Peritoneum

DRS. THOMAS MCCRAE and W. M. L. COPLIN, Philadelphia: The patient was a man who for four years suffered from ascites; there were no diagnostic evidences available until the end of the third year, when fluid withdrawn by tapping was found to contain colloid material resembling tapioca grains. In the last month of life, freely movable tumors could be felt in the abdomen. A terminal symptom was obstinate diarrhea; food taken could be recognized in the stools three or four hours later.

DISCUSSION

DR. LOUIS B. WILSON, Rochester, Minn: I should like to suggest that for the sake of accuracy it might be well to abandon the word "colloid" and adopt "mucoid" for the designation of this form of cancer.

DR. DAVID RIESMAN, Philadelphia: At the Philadelphia Hospital there was recently a woman with mucoid cancer; the abdomen was full of hard masses arising from the mesentery and peritoneum generally; there was only one nodule on the liver. The neoplasms seemed to be entirely surface growths. The point of origin was a fungoid cancer of the anus.

DR. ALFRED STENGEL, Philadelphia: It has been observed that after laparotomy the ascites in these cases may disappear and not recur. I have seen two cases in which simple incision resulted in freedom from ascites and prolongation of life for several years. This is not a curative measure but it may be enormously helpful in making comfortable the last days of these patients.

DR. THOMAS MCCRAE, Philadelphia: Laparotomy was done in this case with no beneficial result.

DR. W. M. L. COPLIN, Philadelphia: With regard to the proper designation of the neoplasm, collagen and precollagen were just as abundant as mucoid. It is doubtful whether either term is properly designative.

Aleukemic Lymphadenosis

DR. T. B. FUTCHER, Baltimore: The patient was a single woman, aged 58. Her symptoms were dyspnea and weakness, with enlargement of axillary, cervical, inguinal and postperitoneal glands. The blood count revealed 7,000 leukocytes, 67 per cent. of which were large and small lymphocytes. The heart and kidneys were normal. Diagnosis rested between Hodgkin's disease and an atypical leukemia. The leukocytes during her stay in the hospital ranged between 7,000 and 14,000; large and small lymphocytes constituted from 67 to 90 per cent. Wassermann and tuberculin reactions were negative. A gland was removed: cultures were negative; histologically, it showed a chronic lymphadenosis, resembling lymphosarcoma. Hodgkin's disease was not simulated. Treatment with sodium cacodylate resulted in clinical improvement but did not improve the blood. There is now a metastatic nodule in the eyelid. The case must be regarded as one of Naegeli's aleukemic lymphadenosis, in which there is no change in the total white cell count, but a great change in the differential picture. The disease is very chronic and is characterized by a tendency to the development of metastases in the skin. The course may abruptly become acute with an early fatal termination.

DR. FRANKLIN W. WHITE, Boston: The case suggests some analogies with certain mouse tumors. As in man, so also in mice, there is an indistinguishable series of conditions from lymphadenoma to sarcoma. But the tumors in question are not inoculable, not contagious, and occur only in cancer strains. They cannot be produced by ordinary infectious agents. There are many things to indicate that the leukemias may act just like these other conditions; leukemia may, in fact, be a malignant tumor of the leukocytes.

(To be continued)